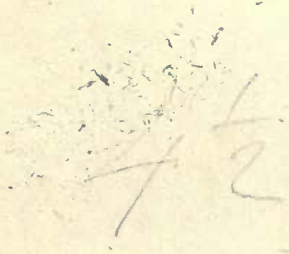
A 000 047 858 6
UC SOUTHERN REGIONAL LIBRARY FACILITY

The zoology & the English poets, corrected by the writings of modern naturalists. London 1845. Longman.

This is a reissue with different title page [? 1845]. ? which is really the First.



THE

MODERN NATURALIST;

COMPRISING THE

Zoology of the English Poets.

BY

ROBERT HASELL NEWELL, B.D.

RECTOR OF LITTLE HORMEAD, HERTS.

AUTHOR OF "REMARKS ON GOLDSMITH," AND "LETTERS ON THE SCENERY OF WALES."

London:

J. S. LINGHAM, CROSS STREET.

[? 1845]

TO

J. E. GRAY,

ETC. ETC.,

KEEPER OF ZOOLOGY IN THE BRITISH MUSEUM,

THIS VOLUME IS INSCRIBED,

IN GRATEFUL ACKNOWLEDGMENT OF

HIS FRIENDLY AND VALUABLE

SERVICE.

2091151

PREFACE.

To correct some zoological errors in English poetry by a comparison with the writings of modern Naturalists, is the design of the following compilation.

The Poets are early read, and hence the erroneous notions imbibed from them are deeply fixed, and long retained; from the very circumstance, too, of the medium which conveys, and the authority which supports them: the utility, therefore, of the application of natural history to the present purpose is obvious.

False representations of natural objects can never be necessary: the beautiful features of Nature are inexhaustible, and a faithful delineation of them is capable of being set off by the hand of Genius and Taste with all the graces of poetry. Neither are the poets always re-

sponsible for their inaccuracies; they took the subjects most suitable to their purpose, as they were generally known and believed at the time they wrote, and as they were defended by classical authority.

But though fictions of some kind are justly regarded as the soul of poetry, there are two cases in which false descriptions of natural objects do not seem to be allowable. To apply natural history to a moral purpose is the highest use of the science; and illustrations of the existence and attributes of the Deity, or pious and moral sentiments drawn from that source, should surely be founded on truth. For this we have the example of Sacred Writ: nowhere else are to be found such exalted praise and admiration of the works of Nature; nowhere are they applied so powerfully, and with such simple and affecting truth, in teaching and enforcing precepts of piety and virtue, and in displaying the perfections of their Divine Author.

In poetry purely descriptive an adherence to truth seems equally necessary. Here the very intention of the poet is to inform and instruct: to represent nature falsely, therefore, is to deceive the reader, to deprive him of the knowledge which he expects, and, as in the former case, to derogate from the honour due to the Author of Nature.

The present improved state of natural history has corrected many former mistakes, as well as the extravagant and unnatural fables of the ancient poets: and, as the science advances, a wider and more accurate acquaintance with its discoveries will prevent a trite repetition of the same images; objects will be viewed in new lights; new properties and qualities will be known; and the poets be thus enabled to spread through their works faithful descriptions in boundless variety, sublimity, and beauty.

In forming this collection some popular superstitions have been included, the inaccurate passages occasionally contrasted with true de-

scriptions, a few illustrative engravings added from the old naturalists, and some brief zoological notice of such subjects as did not appear generally known. The corrections have been given throughout, as nearly as possible, in the words of the authors, in a spirit of candid criticism, and with the sole wish of increasing the interest and usefulness of natural knowledge, by making it more correct.

ALPHABETICAL TABLE

OF

AUTHORS REFERRED TO IN THIS WORK.

Aldrovandus (Ulysse). Natural History. 14 vols. folio. From 1599 to 1640.

Baker (Henry). Employment for the Microscope. 1 vol. 8vo; London, 1753.

Bewick (Thomas). History of Quadrupeds, also of British Birds. 2 vols. 8vo; Newcastle, 1797.

Bingley (Rev. R.). Animal Biography. 3 vols. 8vo; London, 1805.

Brown (Sir Thomas). Pseudodoxia Epidemica; or, Inquiries into Vulgar and Common Errors. 1 vol. 4to; London, 1672.

Buffon (George Louis Leclerq, Comte de). Histoire Naturelle, Générale, et Particuliere; avec la Description du Cabinet du Roi. 36 vols. 4to; Paris, 1749—1789.

Butler (Samuel). The Feminine Monarchie; or, a Treatise on Bees, and the due ordering of them. 1 vol. 4to; Oxford, 1631.

Costa (Emanuel Mendez da). Historia Naturalis Testaceorum Britanniæ. 2 vols. 4to; London, 1778.

Cuvier (Le Baron). The Animal Kingdom arranged

in uniformity with its Organisation; with Supplementary Additions. 17 vols. 8vo; London, 1827.

Gesner (Conrad.). Opera Tigurini. 3 vols. folio, 1558.

Grose (Francis). Provincial Glossary; with a Collection of Local Proverbs and Popular Superstitions. 1 vol. 8vo; London, 1787.

Huber (Francis). New Observations on Bees. 1 vol. 8vo.; Edinburgh, 1809.

Huber (Peter). Recherches sur les Mœurs des Fourmis Indigènes. 1 vol. 8vo; Paris et Geneve, 1810.

Jackson (Thomas). Cornucopia; or, divers Secrets, wherein are contained the rare Secrets of Man, Beasts, Fowls, Fishes, Trees, Plants, Stones, and such like; most pleasant and profitable, and not before committed to be printed in English. Newlie drawn out of divers Latin Authors into English. 1 vol. 4to; 1596.

Kirby and Spence (William). Introduction to Entomology. 3 vols. 8vo; London, 1815.

Latham (John). General Synopsis of British Birds; with Supplement. 3 vols. 4to; London, 1782, et seq.

Lister (Martin). Historia Animalium Angliæ, Tractatus tres; scilicet de Cochleis Terrestribus et Fluviatilibus, de Araneis, et de Cochleis Marinis. 1 vol. 4to; London, 1678.

Montague (George). Ornithological Dictionary; or, Alphabetical Synopsis of British Birds. 2 vols. 4to; London, 1781.

Pennant (Thomas). History of Quadrupeds. 2 vols. 4to; London, 1781. British Zoology. 3 vols. 8vo; London, 1776.

Ray (John). Wisdom of God manifested in the Works of the Creation. 1 vol. 12mo; London, 1691.

Shaw (George, Dr.). General Zoology; or, Systematic

Natural History. 8vo, vol. 1, &c. Naturalists' Miscellany: Zoological Lectures. London, 1800—1809.

Topsel (Edward). Collection from the Writings of Conradus Gesner and others. 1 vol. folio; London, 1658.

Transactions of the Linnæan Society. 4to, vol. 1, &c.; London, 1791, et seq.

Transactions of the Royal Society. 4to, vol. 1, &c.; London, 1665, et seq.

White (Rev. Gilbert). Natural History of Selborne. 2 vols. 8vo; London, 1802.

Wood (William). Zoography; or, the Beauties of Nature displayed. 3 vols. 8vo; 1807.

Yarrell (William). History of British Birds. 3 vols. 8vo; London, 1843.

ZOOLOGICAL INDEX.

INSECTS.

	Page		Page
Ant	3	Glowworm	30
Bee	10	Gossamer	36
Blighters	16	Lady-bird	48
Death-Watch	19	Nut-Maggot	53
Gadfly	25		

BIRDS.

Barnacle	57	Peacock	83
Bittern	61	Pelican	85
Bullfinch	63	Redbreast	88
Cuckoo	65	Rook	93
Fieldfare	72	Swallow	102
Night-Raven	76	Wild Swan	108
Ostrich	79		

REPTILES.

Basilisk	115	Salamander	126
Chameleon	118	Slow-worm	128
Common Snake	122	Toad	130
Cerastes	124		

MAMMALIA.

	Page		Page
Bear - - -	137	Mole - - -	147
Jackal - - -	139	Porcupine - -	151
Hyæna - - -	141	River-Horse - -	153
Lion - - -	144	Whale - - -	157

INSECTS.

ANT.

(Formica.)

The natural history of Ants has been involved in much error. The accounts of the ancients are more fabulous than true; and those even of some modern naturalists are not entirely to be depended upon. Ants were long, and generally, supposed to subsist on corn, and celebrated for their industry in collecting it — an error occasioned by the resemblance of their pupæ, on a cursory view, to grains of wheat, and by their care in removing them to greater or smaller elevations, according to the state of the atmosphere.* They were also anciently believed to bite the germ of the corn which they collected, in order to stop its vegetation, and to store it up for winter provision.†

Our poets, drawing their information from

* Shaw, Gen. Zool. vol. vi. pt. 2. p. 352.

† This opinion of Pliny (l. xi. c. 30.) was considered a fiction by Ray, as far back as 1691. (*Ray's Wisdom of God*, p. 99.)

these fabulous sources, or sheltering themselves under classical authority, have followed each other in the self-same track of error, and by the introduction of these faults have disfigured many of their beautiful descriptions and illustrations of industry, sagacity, and foresight.

First crept
The parsimonious emmet, provident*
Of future, in small room large heart inclos'd;
Pattern of just equality perhaps
Hereafter, join'd in her popular tribes
Of commonalty.

MILTON. *Par. Lost*, b. vii. l. 484.

Tell me, why the *ant*
In *summer's plenty thinks of winter's want?*
By constant journey *careful* to *prepare*
Her stores, and *bringing home the corny ear*,
By what instruction *does she bite the grain?*
Lest, hid in earth, and taking root again,
It might elude the foresight of her care.

PRIOR. *Poems: Solomon.*

They don't wear their time out in sleeping or play;
But *gather up corn* in a sunshiny day,
And *for winter they lay up their stores:*

* Strictly speaking, the *Formica fuliginosa* is the *emmet*. Cuvier, vol. xv. p. 444.

They manage their work in such regular forms,
One would think they *foresaw* all the frosts and
the storms,
And so brought their food within doors.
WATTS. *Hymns: The Emmet.*

The *sage industrious ant*, the *wisest insect*,
And *best economist* of all the field:
For when as yet the favourable sun
Gives to the genial earth th' enlivening ray,
——— All her subterraneous avenues,
And storm-proof cells, with management most meet,
And unexampled housewif'ry, she frames;
Then to the field she hies, and *on her back*
Burden immense! brings home the cumbrous corn:
Then, many a weary step, and many a strain,
And many a grievous groan subdued, at length
Up the huge hill she hardly heaves it home:
Nor rests she here her providence, but *nips*
With subtle tooth the grain, lest from *her garner*
In mischievous fertility it steal,
And back to daylight vegetate its way.
SMART. *On the Omniscience of God.*

Solomon's lesson* has been generally adduced

* "Go to the ant, thou sluggard, consider her ways, and be wise: Which, having no guide, overseer, or ruler, provideth her meat in summer, and gathereth her food in the harvest."—*Proverbs*, vi. 6, 7, 8.

"The ants are a people not strong, yet they prepare their meat in summer."—Ch. xxx. v. 24.

as a strong confirmation of the ancient opinion: it can, however, relate only to the species of a warm climate, the habits of which are probably different from those of a cold one. So that his words, as commonly interpreted, may be perfectly correct and consistent with nature, and yet be not at all applicable to the species which are indigenous in Europe.

These words may very well be interpreted simply to mean, that the Ant, with commendable prudence and foresight, makes use of the proper seasons to collect a supply of provisions sufficient for her purpose. There is not a word in them implying that she stores up grain, or other provision. She prepares her bread, and gathers her food, viz., such food as is suited to her, in summer and harvest, that is, when it is most plentiful; and thus shows her wisdom and prudence by using the advantages offered her. The words thus interpreted, as they may be without any violence, will apply to our European species, as well as to those which are not indigenous.*

* Kirby and Spence, Entom. vol. ii. p. 47. 1st edit.

It is now clearly ascertained that Ants are almost entirely *carnivorous*. They have no skill to construct magazines, and fill them with provisions, and cannot, like bees, draw nourishment from cells without going abroad. Those which are occupied at home depend for their subsistence upon the workers, which go abroad to forage, and bring them back small insects, or bodies of such as they have dissected on the spot; then each attacks the prey, which is soon dispatched. But when they meet with ripe fruit, or very delicate game, such as worms, lizards, and other small dead animals, they drink out their juices, and thus never fail to come back to their nest plentifully stored with liquid food, which at their return they disgorge into the mouths of their companions.* The *honey dew* also, the secretion, in the form of liquid sugar, from the *Pucerons*, *Aphides*, or *Blighters*, forms a principal nourishment of ants. They have the art of obtaining this liquor from the insects at pleasure, and a supply of them is always found in or near the nest of one species

* Les Recherches par P. Huber, p. 177.

(*les fourmis jaunes*). The gall insect also affords them a similar food.*

It is further certain that European Ants have no need of winter stores, since they are torpid during great part of that season, in extreme cold; but when the season is not very severe, the depth of their nests shelters them from the frost. They do not become torpid till the thermometer sinks to 2° (of Reaumur) *below* the *freezing point.* At *that* temperature they would be exposed to the misery of famine, if they were not provided with a resource against this temporary revival; and this is no other than the *Pucerons,* which, by a wonderful agreement of circumstances not to be attributed to chance, are torpid exactly at the same degree of cold with the Ants, and revive too at the same time with them; and thus are always to be found when there is a demand for them. Ants, which have not the art of collecting these insects within their habitations, are at least acquainted with their retreats; they hunt them out at the foot of trees and roots of shrubs which they

* Linn. Trans. vol. vi. p. 75.; Huber, p. 180—197.

before frequented. At the first thaw they glide along the hedges and paths, which conduct them to their providers, and bring back to the republic a small quantity of their honey, for a very little is sufficient to support them in winter.*

* Huber, p. 202.

BEE.

(Apis mellifera.)

Few of the insect tribe have more frequently attracted the attention of poets than the Bee; yet their descriptions are often vague and general, and given with more regard to poetical embellishment than to accurate delineation. Many circumstances too in this insect's economy have, till lately, been imperfectly known. Milton adopted the opinion of his time, that the *working* Bee is the *female.**

> Swarming next,
> *The female bee*, that feeds *her* husband drone
> Deliciously, and builds *her* waxen cells
> With honey stored.
>
> *Par. Lost*, b. vii. l. 489.

* He probably gained his information from a Treatise on Bees by C. Butler, entitled, "The Feminine Monarchie," published in 1631. That author says, "Reason and sense agreeing, do show, that the honey bees are the females, by whom the bees of both sexes, first the males, then the females, are bred."—Ch. iv. p. 54.

Modern researches, especially those of M. Huber, prove decidedly, that the *working* Bees, which form the mass of the population, are *mules*, or neuters, that the *drones* (as they are usually called) are the *males*, and that the *queens*, of which there is generally but one in a hive, are the *females*.*

In the two following passages, the epithets "*honied* *," and "*waxen*," are entirely poetical, as recent observations have fully shown:

> Hide me from day's garish eye,
> While the bee with *honied thigh*,
> That at *her* flowery work doth sing.
> MILTON. *Penseroso*, l. 141.

> The honey bags steal from the humble bees,
> And for night tapers crop their *waxen thighs*.
> SHAKSPEARE. *Mids. Night's Dream*, act iii. sc. 1.

When the stomach of the Bee is filled with nectar, it next, by means of the feathered hairs with which its body is covered, pilfers from the flowers the fertilising dust of the anthers, or

* Huber's New Observations on Bees, p. 77. Cuvier, vol. xv. p. 530. These authors have shown that the working Bees are capable of being converted into *females*, and thus supply the loss of a queen.

pollen, which is equally necessary to the society with the honey, and may be named the ambrosia of the hive, since from it the bee-bread is made, serving as food both for old and young. When the body of the Bee is covered with the farina, with the brushes of its legs, especially of the hind ones, she wipes it off, not as we do our dusty clothes, to dissipate it in the air, but to collect every particle of it, and then to knead and form it into two little masses, which she places, one in each of the baskets formed by the hairs on her hind legs. When the Bee, laden with it, arrives at the hive, she sometimes stops at the entrance, and very leisurely detaching it by piecemeal, devours one or both the pellets on her legs, chewing them with her jaws. Sometimes she enters the hive, and walks upon the combs, and whether she walks or stands still, keeps beating her wings. By the noise thus produced, which seems a call to some of her fellow-citizens, three or four go to her, and, placing themselves around her, begin to lighten her of her load, each taking and devouring a small portion of her ambrosia: this they repeat, if more do not arrive to assist them,

three or four times, till the whole is disposed of. This bee-bread is generally found in the second stomach and intestines, but the honey never, which induced Reaumur to think, but he was mistaken, that the Bee elaborated wax from it.*

Mr. Rogers, in his elegant poem, supposes the bee to be conducted to the hive by retracing the scents of the various flowers which it had visited.

Hark! the bee winds her small but sullen horn,
Blithe to salute the sunny smile of morn;
O'er thymy downs she bends her busy course,
And many a stream allures her to its source.
'Tis morn, 'tis night; that eye, so finely wrought,
Beyond the reach of sense, the soar of thought,
Now vainly asks the scenes she left behind,
Its orb so full, its vision so confin'd!
Who guides the patient pilgrim to her cell?
Who bids her soul with conscious triumph swell?
With conscious truth retrace the mazy clue
Of varied scents, that charm'd her as she flew?
Hail, memory, hail! thy universal reign
Guards the least link of beings' glorious chain.
Pleasures of Memory, Pt. 1.

This idea, however, is more poetical than accurate, Bees *flying straight* to their hives from

* Kirby and Spence, Entomol. vol. ii. p. 181—185.

great distances. The poet might have employed with as much effect the real fact of Bees distinguishing their own hive out of numbers near them when conducted to the spot by instinct. This recognition of home seems clearly the result of memory.*

A more intimate acquaintance with the natural history of this insect, which modern discoveries have so much enlarged, would supply the poet with many interesting facts less trite and common than those usually adduced, and equally adapted to his purpose. The Bee is, of all the social insects, the one whose instinct is most perfect, the only one whose habits are not carnivorous, and whose existence is one of the blessings of nature. The others are born for destruction; she, on the contrary, appears to have been made to secure the fecundation of vegetables, by transporting from one to another the pollen of their flowers, which the winds alone could not as certainly have propagated. Our domestic Bee can live in every climate; it can brave the wintry breath of Siberia, and

* Kirby and Spence, Entomol. vol. ii. p. 181—185.

the heats of the torrid zone.* We may close our remarks on this wonderful and useful insect with the following general description, the most vigorous and energetic, perhaps, in our language.

The hive is up in arms ! expert to teach,
Nor proudly to be taught unwilling, each
Seems from her fellow a new zeal to catch,
Strength in her limbs, and on her wings dispatch:
The bee goes forth! from herb to herb she flies,
From flower to flower, and loads her lab'ring thighs
With treasur'd sweets; robbing those flowers, which, left,
Find not themselves made poorer by the theft;
Their scent as lively, and their looks as fair,
As if the pillager had not been there:
Ne'er does she flit on Pleasure's silken wing,
Ne'er does she, loit'ring, let the bloom of spring
Unrifled pass, and on the downy breast
Of some fair flower indulge untimely rest;
Ne'er does she, drinking deep of those rich dews
Which Chemist Night prepar'd, that faith abuse
Due to the hive, and selfish in her toils,
To her own private use convert the spoils;
Love of the stock first call'd her forth to roam,
And to the stock she brings her booty home.

CHURCHILL. *Gotham*, b. 3.

BLIGHTERS.

(Aphides.)

This interesting genus of insects is the cause of blights in plants: they feed entirely on vegetables, which they destroy by exhausting the juices for their own support: for this purpose, they are furnished with a long hollow-pointed proboscis or trunk, which, when not in the act of feeding, folds under their breast. The substance termed *honey-dew** is the excrement of the Aphis. Their natural enemies are the Coccinella (lady-bird), Ichneumon Aphidum, Musca aphidivora, the Earwig, and some of the soft-billed birds; they are capable of resisting the effect of immersion in water a great length of time. Hitherto the smoke of tobacco has alone been found adequate to their destruction.†

* Or *mildew*, probably a corruption of *melidew*, from the Greek μέλι, *mel*, *honey*.—N.

† Curtis, Linn. Trans. vol. vi. p. 75.

Thomson has fallen into the error, common in his time, that these insects are brought by an easterly wind; and he has confounded the mischief of caterpillars with those of the Aphis.

> For oft, engendered by the hazy north,
> Myriads on myriads insect armies warp,
> Keen in the poison'd breeze, and wasteful eat
> Through buds and bark into the blackened core
> Their eager way. A feeble race! Yet oft
> The sacred sons of vengeance, on whose course
> Corrosive famine waits, and kills the year.
>
> *Seasons: Spring*, l. 120.

We are fully aware (observes Mr. Curtis) that certain gregarious insects may, at particular times, rise up in the air, and, if small and light, be impelled by any wind that may chance to blow at the time; and on this principle we account for the shower of Aphides described by White to have fallen at Selborne. But certainly this is not the mode in which these insects are usually dispersed over a country. The phenomenon is too unusual; the distribution would be too partial; for Aphides, while at their greatest height of multiplication, do not swarm like bees or ants, and fly off, or emigrate in large bodies, but each male or female Aphis, at

such periods as they arrive at maturity, marches or flies off, without waiting for any other. Yet it may happen, that from a tree or plant thickly beset with them, numbers may fly off or emigrate, being arrived at maturity, at the same moment of time: detaching itself from the plant, each pursues its route, intent on the great business of multiplying its species, and settles on such plants in the vicinity as are calculated to afford nourishment to its young.*

* Curtis, Linn. Trans. vol. vi. p. 75.

DEATH-WATCH.

(PTINUS FATIDICUS.)

AMONG the popular superstitions which the almost general illumination of modern times has not yet been able to obliterate, the dread of the Death-Watch may well be considered as one of the most predominant, which, though nothing more than a small insect, continues to disturb the habitations of rural tranquillity with groundless fears and absurd apprehensions. This, like various other superstitions, has found its way into poetry.

The wether's bell,
Before the drooping flock, toll'd forth her knell;
The solemn *death-watch click'd* the hour she died.
GAY. *Pastoral* 6.

A wood-worm
That lives in old wood, like a hare in her form;
With teeth or with claws it will bite or will scratch,
And chambermaids christen the worm a *death-watch:*
Because, like a watch, it always cries click;
Then woe be to those in the house *who are sick;*

For, as sure as a gun, they will *give up the ghost,*
If the maggot cries click, when it scratches a post.
SWIFT. *The Wood-worm*, v. 7. p. 322.*

It is chiefly in the advanced state of the spring that this alarming little being commences its sound, which is no other than the call or signal by which insects of this species usually attend to each other; and which may be considered as analogous to the call of birds†, though not owing to the voice of the insect, but to the beating on any hard substance with the shield or fore-part of its head. The prevailing number of distinct strokes which it beats is from

* Edit. 1784.

† It is observable that Sir Thomas Brown includes the death-watch in his *Pseudodoxia Epidemica*, and compares its noise to that made by the woodpecker in the spring, which is now known to be a similar signal, produced in a somewhat similar manner. The learned author thus concludes his observations: "Few ears have escaped the noise of the death-watch; and though this is conceived to be an evil omen or prediction of some person's death, wherein, notwithstanding, there is nothing of rational presage or just cause of terror unto melancholy and meticulous heads; he that could extinguish the terrifying apprehensions hereof might prevent the passions of the heart, and many cold sweats in grandmothers and nurses, who, in the sickness of children, are so startled with these noises."—P. 109.

7 to 9 or 11; which very circumstance may perhaps add, in some degree, to the ominous character, which it bears among the vulgar. These sounds or beats are given in pretty quick succession, and are repeated at uncertain intervals; and in old houses, where the insects are numerous, may be heard at almost every hour of the day, especially if the weather be warm. The insect is of a colour so nearly resembling that of decayed wood, viz. of an obscure greyish brown, that it may for a considerable time elude the search of the inquirer: it is about a quarter of an inch in length, and is moderately thick in proportion, and the wing shells are marked with numerous irregular variations of a lighter or greyer cast than the ground colour. It belongs to the class of coleopterous insects, or such as have horny or shelly sheaths defending their wings; for it is a winged insect, though rarely seen in flight. We must be careful not to confound this insect, which is the real death-watch of the vulgar, (emphatically so called,) with another insect, which makes a sound like the ticking of a watch, and which continues its sound for a long time without intermission: it

belongs to a totally different tribe, and is the *Termes pulsatorius* of Linnæus.*

The following observations still further elucidate this curious subject. There is often heard in a chamber, and when one is alone and a profound silence prevails, a small continued noise like the ticking of a watch. It ceases the moment any motion is made, and does not recommence till the return of silence. Some have attributed this noise to a small species of spider, others to a very little insect designated by Linnæus under the name of *Termes pulsatorius*, and under that of *Hemerobius pulsatorius* by Fabricius. Rolandes pretends that this sound is produced by the female of this same *termes*, by giving its head reiterated blows on the wood. Geoffroy believed that it was occasioned by a species of Anobium, which strikes with redoubled blows the old wood for the purpose of piercing it, and thus procuring itself a lodging. The spider, of which mention has been made, possesses no instrument of sufficient hardness and

* Shaw, Nat. Miscell. vol. iii. pl. 104. The death-watch most noticed by British observers is the *Anobium tessellatum*. Kirby, Entom. vol. ii. p. 376.

strength for the production of such a noise. The *termes*, equally unprovided with similar means, is, moreover, too small to produce a sound of so much strength. Geoffroy was undoubtedly right when he attributed this phenomenon to a species of the genus now under consideration. This fact has been confirmed by the observations of M. Latreille, who, moreover, justly claims the exclusive merit of having discovered the cause, or rather the design, of this ticking. The two sexes, striking reiteratedly the wood with their mandibles, call each other reciprocally, approximate, and finish by a union. Analogy would lead us to incline to the opinion of M. Latreille, that this noise is intended to facilitate the approximation of the sexes and the reproduction of the species. At the same time it is probable that further observations are necessary for the complete elucidation of this interesting phenomenon.

Superstition, which has availed itself of every thing for the purpose of painting its terrors and strengthening its tyranny over the human mind, has not suffered this little phenomenon to escape it. The vulgar name of *Death-Watch*, given to

this insect, sufficiently announces the popular prejudice respecting it; and there can be little doubt, that the fate of many a nervous and superstitious patient has been accelerated by listening, in the solitude and silence of night, to this imagined knell of his approaching dissolution.*

* Cuvier, Anim. King. vol. xiv. p. 380.

GADFLY.*

(Œstrus Bovis et Equi.)

The Œstrus (breeze, brize, or gadfly) is not a gregarious or social, but a *solitary* insect, appearing singly and not in a *flight* or *swarm.*† This is a mistake which Thomson was probably led into from the celebrated passage in Virgil, which he seems to have closely imitated.‡

> Light fly his slumbers, if perchance *a flight*
> Of *angry gadflies* fasten on the herd,
> That startling, scatters, from the shallow brook,
> In search of lavish stream; tossing the foam,

* Or goad-fly, from *Goad*, in Saxon ȝaδ, and *fly*. — *Johnson.*

† In a letter from my late friend Rev. W. Whitear, he writes, "Early in May, Mr. and Mrs. Kirby made us a visit. I asked him your question respecting gadflies. He said he was not aware that they *ever flew in flocks.*" — N.

‡ Plurimus Alburnum volitans, cui nomen asilo
Romanum est, Graii œstrum vertere vocantes, &c.
Georg. b. iii. l. 147.

Yet perhaps Virgil is not chargeable with this error. For may not *plurimus* (not *plurimi*) have the force of the English *very many a one*, or be translated, *very frequent?* — N.

They scorn the keeper's voice, and scour the plains,
Through all the bright severity of noon.
Seasons: Summer, l. 498.

Other poets describe this insect as a *single* one. Thus Spenser, in "*The World's Vanitie.*" He has also armed it with a sting: —

A breeze, a little scorned creature,
Through his fair hide *his angry sting* did threaten;
And vext so sore, that all his goodly feature,
And all his plenteous pasture, nought him pleas'd.
c. ii. l. 20.

Shakspeare also twice; and in the latter passage he seems to allude to a curious particular mentioned by Mr. Bracey Clark in his admirable history of this genus: —

The herd hath more annoyance by *the brize*
Than by the tyger.
Troil. and Cress., act i. sc. 3.

Cleopatra,
The breeze upon her, like a cow in June,
Hoists sail and flies.
Anthony and Cleop., act iii. sc. 8.

Hurdis notices the same with his usual accuracy: —

What time the cow stands knee-deep in the pool,
Lashing her sides for anguish, scaring off,
With sudden head reversed, the insect swarm

That bask and prey upon her sunny hide —
Or when *she flies, with tufted tail erect,*
The breeze-fly's keen invasion, to the shades
Scampering madly. *Fav. Vill.* p. 33.

The Œstrus Bovis is a rare, and also the largest and most beautiful of the European species. It deposits eggs, with apparently severe pain to the animal, in the skin of the backs of horned cattle, between it and the cellular membrane, where its larva is hatched; from thence, at its full growth, it falls to the ground, and, seeking a convenient retreat, becomes a chrysalis: in this state it continues from about the latter end of June to about the middle of August, before the fly appears. Although its effects on cattle have often been remarked, yet the fly itself is rarely seen or taken, as the attempt would be attended with considerable danger. The pain it inflicts in depositing its egg is much more severe than in any of the other species. When one of the cattle is attacked by this fly it is easily known by the extreme terror and agitation of the whole herd: the unfortunate object of attack runs bellowing from among them to some dis-

tant part of the heath, or the nearest water; while *the tail*, from the severity of the pain, *is held with* a tremulous motion *straight from the body in the direction of the spine*, and the head and neck, are also stretched out to the utmost. The rest, from fear, generally follow to the water, or disperse to different parts of the field; and such is the dread and apprehension in the cattle of this fly, that one * of them has been seen to meet the herd when almost driven home, and turn them back, regardless of the sticks, and stones, and noise of their drivers, nor could they be stopped till they reached their accustomed retreat in the water.

The whole of this genus of insects appear to have a strong dislike to moisture, since the animals find a secure refuge when they get into a pond or brook, where the *Tabani*, *Conopes*, and other flies, follow without hesitation, but the Œstri rarely or never; and in cold, rainy, or windy weather they are not seen.†

* The same is true of the *Œstrus Tarandi* (Lapland Gadfly), which infests the reindeer. Pennant, Hist. Quad. vol. i. p. 186.

† Linn. Trans. No. 26. p. 289.

There is a popular error respecting the *Œstrus Equi* (*hæmorrhoidalis*), which Shakspeare has followed, and which has been judiciously explained by Mr. Clark.

Shakspeare makes the carrier at Rochester observe: "Peas and oats are as dank here as a dog, and that's the next way to give *poor jades the bots.*" — *Henry IV.*, act iv. sc. 1.

The larvæ of this insect (says Mr. C.) are mostly known among the country people by the name of *wormals, wormuls, warbles,* or more properly *bots.* And our ancestors erroneously imagined that poverty or improper food engendered those in horses.

The truth seems to be, that when the animal is kept without food the *bots* are also, and are then, without doubt, most troublesome; whence it was very naturally supposed that poverty or bad food was the parent of them.*

* Linn. Trans, ibid.

GLOWWORM.

(LAMPYRIS NOCTILUCA.)

THE Glowworm has till lately been incorrectly described, and some of the most pleasing facts in its economy unobserved or unknown. Shakspeare, in his Midsummer Night's Dream, has fallen into an error which his own observation might have easily corrected.

> The honey-bags steal from the humble bees;
> And for night tapers crop their waxen thighs,
> And light them at the *fiery glowworm's eyes.*
> Act iii. sc. 1.

He might have observed that the light proceeds from the *tail*, and not from the *head* of the insect. The passage is faulty also in another point, not so obvious, nor indeed known in his time; for late experiments have shown that the substance affording the light, and here poetically employed in lighting fairies' tapers, is incapable

of inflammation if applied to the flame of a candle or red-hot iron.*

In Hamlet he again introduces this insect, but, as it should seem, incorrectly.

> The glowworm shows the *matin* to be near,
> And 'gins to *pale his* ineffectual fire.
> Act i. sc. 3.

The fading of its light at the approach of day contradicts a curious fact related by White, that by observations made on two Glowworms brought from the field to a bank in the garden they appeared to put out their lamps between eleven and twelve, and shine no more for the rest of the night.† He has also mistaken the *sex* of the insect here; for the Glowworm we are accustomed to admire is the *female* insect, about three quarters of an inch in length, of a dull, earthy-brown colour in the upper parts, and beneath more or less tinged with rose-colour, with the two or three last joints of the

* Philosoph. Trans. 1801. p. 281.

† Nat. Hist. Selborne, edit. Markwick, vol. ii. p. 289. This fact is denied neither by his editor, nor by Kirby and Spence, who mention it in their Entomology, vol. ii. p. 211. edit. 1.

body of a pale, whitish, sulphur colour, with a very slight cast of green, and from this the phosphoric light proceeds. It is emitted from the larva and pupa also, though strongest from the complete insect.*

The licence of using natural objects in either sex is generally allowable in poetry, except perhaps in such as is *strictly descriptive.* Thomson, therefore, is scarcely justifiable in saying,—

Along the crooked lane, on every hedge,
The glowworm lights *his* gem, and through the dark
A moving radiance twinkles.

Summer, l. 1682.

The male glowworm is smaller than the female, and is provided both with wings and wing-sheaths. It is but rarely seen, and it seems even at present not very clearly determined whether it is luminous or not. The general idea among naturalists has been that it is not, and that the splendour exhibited by the female is ordained for the purpose of attracting the male †,—a provision full of wonder and beauty, and well adapted to the graces of poetry.

* Shaw, Gen. Zool. vol. vi. pt. 1. p. 76. † Ibid.

Warm on her mossy couch the radiant worm,
Guard from cold dews her love illumin'd form;
From leaf to leaf conduct the virgin light;
Star of the earth, and diamond of the night.
DARWIN, *Econ. Veget.* c. 1. l. 192.

When evening closes Nature's eye,
The glowworm lights her little spark,
To captivate her favourite fly,
And tempt the rover through the dark.

Conducted by a sweeter star
Than all that deck the fields above,
He fondly hastens from afar,
To sooth her solitude with love.
MONTGOMERY. *Poems*, v. 2.

The colour of the light emitted by the glowworm, the "*viridis lux*" of Lucretius *, is another peculiar beauty, which has been thus happily described, —

Nor travels my meand'ring eye
The starry wilderness on high;
Nor now with curious sight,
I mark the glowworm, as I pass,
Move with *green radiance* through the grass,
An emerald of light!
COLERIDGE. *Poems*, p. 119.

* Grandes viridi cum luce smaragdi.
b. 4. l. 1120.

Luminous insects* have often attracted the notice of poets; their brilliancy, variously tinted light, and connection with the evening and night scenery of the fairest seasons, affording subjects for beautiful, though sometimes inaccurate, description. "The fire-flies of the West Indies" (observes Edwards) "are far more luminous than the Glowworm, and in the mountainous and interior parts of the larger islands they are innumerable; at night filling the air on all sides like so many living stars, to the great astonishment and admiration of a traveller unaccustomed to the country.† A beautiful one, the fire-fly of St. Domingo (*Elater Noctilucus*), has been confounded by Southey, in his poem of Madoc, with quite a different insect, the Lantern-bearer of Madame Merian (*Fulgora Lantenaria*). ‡

* The glowworm is not the only luminous insect in our country: there is a species of Scolopendra which certainly is so: "The luminous appearance also on oyster-shells, in the dark, is said to be produced by three sorts of animalcula, which have been discovered on them."—*Baker on the Microscope*, p. 399.

† Edwards, Hist. West Indies, vol. i. p. 8.

‡ Kirby and Spence, Entom. vol. ii. p. 417.

She beckoned, and descended, and drew out,
From underneath her vest, a cage, or net
It rather might be called, so fine the twigs
Which knit it; where, confined, two fire-flies gave
Their lustre:—By that light did Madoc first
Behold the features of his lovely guide.

MADOC. *The Deliverance*, sect. 17.

In another passage of the same poem he describes the Domingo fire-fly faithfully and elegantly: —

Sorrowing we beheld
The night come on; but soon it did display
More wonders than it veiled: innumerous tribes
From the wood-cover swarmed, and darkness made
Their beauties visible; one while they streamed
A light blue radiance upon flowers that closed
Their gorgeous colours to the eye of day:
Now motionless and dark, eluded search,
Self-shrouded; and anon, starring the sky,
Rose like a shower of fire.

Darwin has a similar description: —

So shines the glow-fly, when the sun retires,
And gems the night air with phosphoric fires.

Loves of the Plants, c. 4. l. 51.

And Thomson has noticed an *Oriental* phenomenon of this kind in the kingdom of Siam.

From Menam's orient stream, that nightly shines
With insect lamps.

Seasons: Summer, l. 826.

GOSSAMER INSECT.

SEVERAL strange and mistaken notions have prevailed respecting the substance termed "Gossamer;"* nor was its real nature ascertained till about a century and a half ago. One of the most fanciful opinions, perhaps, was that of Hook, though a learned man, and good natural philosopher, and one of the first Fellows of the Royal Society. "Much resembling a cobweb," says he, "or a confused lock of these cylinders, is a certain white substance, which, after a fog, may be observed to fly up and down in the air. Catching several of these, and examining them with my microscope, I found them to be much of the same form; looking most like to a flake of worsted prepared to be spun, though by what means

* It was formerly supposed to cause the *rot in sheep*. Bailey, Dict., art. Gossomer. Edit. 1730. Derived from *Gossipium*, low Latin. — *Johnson.*

they should be generated or produced is not easily imagined. They were of the same weight, or very little heavier, than air. And it is not unlikely but that *those great white clouds that appear all the summer may be of the same substance.*"* But the more general idea, and one which our early poets contributed to spread and preserve, was, that it was formed from dew evaporated, or rather condensed, by the sun's heat into threads, like those which may be drawn from resinous juices.

As light and thin as *cobwebs* that do fly
In the blue air caused by th' *autumnal sun*,
That *boils the dew*, that on the earth doth lie;
May seem this whitish rag then is the scum;
Unless that wiser men mak't the field-spider's loom.
HENRY MORE.†

And now *autumnal dews* were seen
To *cobweb* every green.
QUARLES. *Emblems*, p. 375.

How part is spun in *silken threads*, and clings,
Entangled in the grass, in *gluey strings*.
BLACKMORE. *Prince Arthur*.

* Micrographia, p. 202.
† Quoted in the Athenæum, 5. 126.

More subtle web Arachne cannot spin;
Nor *the fine nets*, which oft we woven see,
Of *scorched dew*, do not in th' ayre more lightly flee.
SPENSER. *Fairy Queen*, b. 2. c. 12. s. 77.

How still the breeze! save what *the filmy threads*
Of *dew evaporate* brushes from the plain.
THOMSON. *Seasons: Summer*, l. 1209.

Gossamer is now well known to be the web of spiders. The power of these insects to dart out their webs has been supposed to be alluded to by Aristotle* and Pliny, though the ancients are silent upon another curious particular in their history—their power of flight.† This was first observed by Hulse, about the year 1668, and soon after comfirmed by Ray and Lister. This power is chiefly exercised by those of less advanced age, and seems possessed but in an inferior degree by those which are full grown. It is principally

* Aristot. Hist. An. l. 9. c. 39. Pliny, l. 11. c. 24.

† Dryden appears to be mistaken in making Virgil acquainted with it; when upon the scholiast's authority he translates the line,—

Tenuia nec lanæ per cœlum vellera ferri.
Geor. b. 1. l. 387.

The *filmy Gossamer* now *flits no more.*

For the poet is here giving a sign of *serene* weather, when Gossamer is usually *seen.* — N.

in the autumnal season that these diminutive adventurers ascend the air, and contribute to fill it with that infinity of cobwebs which are so peculiarly conspicuous at that period of the year. When inclined to make their aerial excursions, the spider ascends some slight eminence as the top of a wall, or the branch of a tree, and turning itself with its head toward the wind, ejaculates with great force from the papillæ of its abdomen several threads, and, rising from its station, commits itself to the gale, and is thus carried far beyond the loftiest towers*, and enjoys the pleasure of a clearer atmosphere. During their flight it is probable that spiders employ themselves in catching such minute winged insects as may happen to occur in their progress, and, when satisfied with their journey and prey,

* Dr. Lster, in a letter to Mr. Ray, Jan. 20. 1670, speaking of the height to which spiders are able to fly, says, "The last October I took notice that the air was full of webs: I forthwith mounted to the top of the highest steeple on the Minster (York), and could thence discern them, yet exceeding high above me. Some, which fell and were entangled upon the pinnacles, I took, and found them to be *lupi;* which kind seldom or never enter houses, and cannot be supposed to have taken their flight from the steeple." — *Ray's Philosoph. Letters*, p. 95.

they suffer themselves to fall by contracting their limbs, and gradually disengaging themselves from the thread which supports them.*

* Shaw, Nat. Miscell. vol. ix. Plate 308. Several of the facts here stated closely agree with the following curious account given by Dr. Lister in his *Tractatus de Araneis*, published in the year 1678. "Ad mediam Octobrem, in agro Cantabrigiensi, cum croci flores colligunt; summâ serenitate, ut itidem in illis diebus aliquando accidit, supra fidem est, quantum multitudinem horum *, præter alia araneorum genera, adverti, in aere velificantium. Hæc interim mihi de hâc re maxime notabilia occurrebant; eos interdum singulari aliquo filo contentos, interdum plurima simplicia fila, velut totidem micantes radios ad cometæ caudam, ejaculatos fuisse; deinde, hæc eadem fila, proxime ab ejaculatione, purpureo quodam splendore mirum in modum micasse; neque illud silendum putavi; hos araneos cum singularibus filis se exerceant, ea modo abrumpere, modo in exiguos glomerulos niveos recolligere; prioribus scilicet pedibus supra capita celeriter circumactis modo se committere leni auræ, ascensumque in aerem per summos nubes moliri. Illud verissimum est, eos etiam super celsissimam turrem aliquando de industriâ contemplatos, longe tamen extra conspectum meum evectos fuisse. Postremo, in illis longissimis filis aereis, jam in funes crassiores sed inequales implicatis, idque, a longis in aere vectionibus, muscas casu an industriâ irretitas, necnon semel notasse memini."—Ch. 3. tit. 26. p. 79.

* Araneus fuscus alvo oblique virgatâ. In Cuvier's work they are said to be of the genus termed "*Lycosa*," vol. xiii. p. 482.

A German naturalist, M. Bechstein, appears to have investigated this phenomenon with considerable attention: he considers the Gossamer, which is spun over the surface of the ground, as the production of a distinct species of spider. "Having made," he observes, "for many years the closest observations on this phenomenon, I am of opinion it is caused by a species of field-spider so small and active as to be imperceptible unless the observer possess a very acute sight. This spider, if it have no name already, I propose to call the *Gossamer spider, Aranea obtextrix.* It is about the size of the head of a small pin; its head is somewhat long, and has in the forepart eight grey eyes, placed in a circular form; the body is of a shining dark brown colour, with the abdomen shaped like an egg: the legs are yellowish. These spiders first appear in the beginning of October, in woods, gardens, and meadows, where their eggs are hatched in safety; thence they spread themselves over whole districts, and during the rest of October, and till the middle of November, may be found in dry fields throughout Europe. In the beginning of October, when

but few are hatched, some single threads of their webs, extending from twig to twig, are seen only in the sunshine. About the middle of the month their threads are more perceptible, and toward the end, if a person stand in such a position as to see the sun-beams play on the slender threads, hedges, meadows, corn-fields, stubble land, and even whole districts, appear covered with a sort of fine white gauze. The gossamer spider does not weave a web, but only extends its threads from one place to another: these are so delicate, that a single thread cannot be seen unless the sun shines upon it. One of them, to be visible at other times, must be composed of at least six common threads twisted together. In serene, calm days, these spiders work with great diligence, especially after the disappearance of the morning fogs: between twelve and two, however, their industry excites the greatest admiration. A person with a pretty quick eye, or by the help of a glass, may sometimes perceive among the barley stubble such a multitude of these insects extending their threads that the fields appear as if covered with a swarm of gnats.

"Several of the single threads become twisted together by the gentlest breath of wind, and form perceptible threads, which, being broken by stronger winds, unite into thick threads, or even into balls, and float through the atmosphere. These are then called in Germany the *flying summer*, because the summer seems to fly away at the same time. The spiders are conveyed in them; but it is not uncommon to find spiders of other species in them, which have been entangled and dragged away; and even the webs of other spiders, and the dried husks of insects that have been caught by them, are found in the gossamer.

"The Gossamer spiders appear in *swarms* only during harvest, but *single* spiders are to be found through the whole summer."*

A remarkable *shower* of Gossamer is recorded by White to have fallen at Selborne, and in the neighbourhood, in the autumn of 1741. His account may further illustrate this subject, not yet set at rest.

On the 21st of September, being then on a visit, and intent on field diversions, I rose

* Bingley, Animal Biography, vol. iii. p. 480.

before day-break. When I came into the enclosures, I found the stubbles and clover grounds matted all over with a thick coat of cobweb, in the meshes of which a copious and heavy dew hung so plentifully, that the whole country seemed, as it were, covered with two or three setting-nets drawn one over another. When the dogs attempted to hunt, their eyes were so blinded and hoodwinked that they could not proceed, but were obliged to lie down and scrape off the incumbrances from their faces with their fore-feet; so that, finding my sport interrupted, I returned home, musing in my mind on the oddness of the occurrence. As the morning advanced, the sun became bright and warm, and the day turned out one of those most lovely ones which no season but autumn produces — cloudless, calm, serene, and worthy of the south of France itself.

About noon an appearance very unusual began to demand our attention — a shower of cobwebs falling from very elevated regions, and continuing, without any interruption, till the close of the day. These webs were not single, filmy threads, floating in the air in all directions,

but perfect flakes, or rags, some near an inch broad, and five or six long, which fell with a degree of volocity that showed they were considerably heavier than the atmosphere. On every side, as the observer turned his eyes, he beheld a continual succession of fresh flakes falling into his sight, and twinkling like stars as they turned their sides towards the sun. How far this wonderful shower extended would be difficult to say; but we know that it reached Bradley, Selborne, and Alresford, three places which lie in a sort of triangle, the shortest of whose sides is about eight miles in extent. At the second of those places there was a gentleman (for whose veracity and intelligent turn we have the greatest veneration) who observed it the moment he got abroad, but concluded that, as soon as he came upon the hill above his house, where he took his morning rides, he should be higher than this meteor, which he imagined might have been blown, like *thistle-down*, from the common above; but, to his great astonishment, when he rode to the most elevated part of the down, 300 feet above his fields, he found the webs, in appearance, still

as much above him as before, still descending into sight in constant succession, and twinkling in the sun, so as to draw the attention of the most incurious.

Neither before nor after was any such fall observed; but on this day the flakes hung on the trees and hedges so thick, that a diligent person sent out might have gathered baskets-full.*

The appearance of Gossamer on a serene autumnal morning has not escaped the notice of modern poets; and the knowledge of its real nature and production adds a new and beautiful feature to their descriptions of that delightful season:—

So shoot the spider brood, at breezy dawn,
Their glittering net-work o'er the autumnal lawn;
From blade to blade connect with cordage fine
The unbending grass, and "live along the line."
DARWIN. *Econ. Veget.* c. 3. l. 555.

With sparkling dew the web thin woven shines,
That o'er the grass the busy insects twines;
Or on the buoyant air sublimely borne,
Floats tremulous before the breeze of morn.
HOLE. *Prince Arthur*, b. 7.

* Nat. Hist. Selborne, vol. i. p. 323. Markwick's edit.

Small viewless aeronaut! that by the line
Of gossamer suspended, in mid air
Float'st on a sun-beam, living atom! where
Ends thy breeze-guided voyage? with what design
In ether dost thou launch thy form minute,
Mocking the eye? Alas! before the veil
Of denser clouds shall hide thee, the pursuit
Of the keen Swift may end thy fairy sail.

C. SMITH. *Sonnet to the Goss. Insect.*

LADY-BIRD.

(Coccinella septem-punctata.)

The beauty and harmless nature of this little insect have long made it familiar to our notice, and insured its protection. Even with children it is a favourite; and that oft-repeated distich,

> Lady-bird, lady-bird, fly away home,
> Your house is on fire, your children at home,

has saved many a one from their dangerous little clutches.*

Superstition and vulgar prejudice also have attached much importance to the Coccinella. It was formerly considered an efficacious remedy for the cholic and measles; and to kill one, it

* General acquaintance with this insect has given it many provincial names, as *lady-bird*, *lady-fly*, *lady-cow*, *golden knop*, *bishop*, *burnie-bee*, &c. In France they regard them as sacred to the Virgin, and call them *vaches à Dieu*, *bêtes de la Vierge*, &c. — *Curtis on the Aphis*, Lin. Trans. vol. vi.

was believed, would certainly be followed, within the course of a year, with the breaking of a bone, or some other dreadful misfortune.* Its supposed power, too, in a love-charm has been recorded by Gay: —

> This lady-bird I take from off the grass,
> Whose spotted back might scarlet red surpass;
> Fly, lady-bird, north, south, or east, or west;
> Fly, where the man is found, that I love best:
> He leaves my hand, — see! to the west he's flown,
> To call my true love from the faithless town.
>
> GAY. *Pastoral* 4.

The accuracy of modern knowledge, however, has at length discovered the real use of this insect, and taught us to protect it for its valuable services. It is now known to feed, in its larva state, entirely on Aphides, and the havoc made among them may be conceived, from the myriads upon myriads of these interesting little animals which are often to be seen in the years when the leaf-louse abounds. In 1807, the shore at Brighton, and all the watering-places on the south coast, was literally

* Grose, Pop. Sup. p. 64.

covered with them, to the great surprise, and even alarm of the inhabitants, who were ignorant that their little visitors were emigrants from the neighbouring hop-grounds, where, in their larva state, each had slain his thousands and tens of thousands of the Aphis, which under the name of the *fly* so frequently blasts the hopes of the hop-growers. Even they are now becoming sensible of their services, and hire boys to prevent birds from destroying them.*

Hurdis, who has frequently, in his Poems, availed himself of the modern improvements in Natural History, has drawn the following accurate and beautiful picture of the Coccinella in his tragedy of Sir Thomas More.

Sir John.

What d'ye look at?

Cecilia.

A little animal, that round my glove,
And up and down to every finger's tip,
Has travelled merrily, and travels still,
Tho' it has wings to fly: what its name is
With learned men I know not; simple folk
Call it the *lady-bird.*

* Kirby and Spence, Introduct. Entom. vol. i. p. 258.

Sir John.

Poor harmless thing!
Save it.

Cecilia.

I would not hurt it for the world;
Its prettiness says, Spare me; and it bears
Armour so beautiful upon his back,
I could not injure it to be a queen:
Look, sir, its coat is scarlet dropp'd with jet,
Its eyes pure ivory.

Sir John.

Child, I am blind
To objects so minute: I know it well;
'Tis the companion of the waning year,
And lives among the blossoms of the hop;
It has fine silken wings enfolded close
Under that coat of mail.

Cecilia.

I see them, sir,
For it unfurls them now — 'tis up and gone.
Act 1. sc. 3.

Southey, also, in his lines addressed to this insect under the name of "The Burnie-Bee," has thus elegantly described it: —

Back o'er thy shoulders throw thy ruby shards,
With many a tiny coal-black freckle deck'd ;
My watchful eye thy loitering saunter guards,
My ready hand thy footsteps shall protect.

So shall the fairy train, by glowworm light,
With rainbow tints thy folding pennons fret,
Thy scaly breast in deeper azure dight,
Thy burnish'd armour deck with glossier jet.

NUT-MAGGOT.

(Curculio nucum.)

It has been justly remarked, that "the gratification which the Entomologist feels in seeing his favourite study adorned with the graces of poetry is seldom unalloyed with pain, arising from the inaccurate knowledge of the subject in the Poet."* But, though instances of this are numerous, we should hardly have expected to meet with it in so attentive an observer of nature as Dr. Darwin, and on so familiar a subject:—

> So sleeps in silence the Curculio, shut
> In the dark chamber of the cavern'd nut;
> *Erodes with ivory beak the vaulted shell,*
> And quits on filmy wing his narrow cell.
> *Loves of the Plants*, c. 4. l. 409.

This description of the beetle, to which the Nut-Maggot is transformed, is built wholly upon

* Kirby and Spence, Introd. Entom. vol. ii. p. 401.

an incorrect supposition; the Curculio never inhabiting the nut in its *beetle shape*, nor employing its ivory beak upon it, but undergoing its transformation under ground.*

* Kirby and Spence, Introd. Entom. vol. ii. p. 416.

BIRDS.

BARNACLE.

(Balanus anatiferus.)

Few instances of credulity which Poetry has perpetuated are more singular, than that the Barnacle Goose (*Anas erythropus*) is bred from that remarkable marine production the Barnacle.* Gerard has thus described it: "There are found in the north part of Scotland, and in the islands adjacent, called Orcades, certain trees whereon do grow certain shells of a white colour tending to russet, wherein are contained little living creatures, which shells, in time of maturity, do open, and out of them grow those living things, which, falling into the water, become fowls, which we call *Barnacles;* in the North of England, *Brant Geese;* and in Lancashire, *Tree Geese.*"†

* Johnson derives it from the two Saxon words, beapn *a child*, and aac *an oak.*

† Herbal, p. 1587.

And from the most refined of Saints
As naturally grow miscreants,
As *barnacles turn Soland geese*
In th' islands of the Orcades.

BUTLER. *Hudibras*, c. 2. l. 653.

Cochleæ anatiferæ ex arbore dependentes.
From Aldrovandus.

So slow Bootes underneath him sees,
In th' icy isles, *those goslings hatch'd on trees;*
Whose fruitful leaves, falling into the water,
Are turn'd, they say, to *living fowls* soon after:
So *rotten sides* of broken ships do change
To barnacles. O transformation strange!
'Twas first a green tree; then a gallant hull;
Lately a mushroom; then a flying gull.

DU BARTAS. *Divine Week*, p. 228.*

The general name of *anatifera* or *Barnacle*, given to this species, is owing to the fabulous story of its breeding or becoming *Barnacle Geese*, being first observed where that sea-fowl breeds and resorts in great numbers. The animal, a triton, having many cirrhi, or fine feather-like tentacula, with also a produced neck, to which it hung, gave rise to this strange conceit and vulgar opinion, believed not only by the commonalty, but even by the learned naturalists and botanists: one instance of this is our countryman, the botanist Gerard.

The shell is milk-white, smooth, thin, and semi-transparent. The top is open, and from it proceeds a pretty long cylindric, membranous,

* Joshua Sylvester's Translation.

wrinkled tube, neck, or pedicle, of a blood-red colour; and by this neck it affixes itself pendent to the bottom of ships, planks, logs, and other pieces of wood.

It is frequently found on the coasts of Scotland, as also on the coasts of England and Ireland.*

* E. Mendez da Costa. British Conchology, p. 253.

BITTERN.

(Ardea stellaris.)

"The Bittern's bomb, hoarse, heavy, dull"* — the cry which the bird emits in the mornings and evenings of February and March — was formerly supposed to be produced by the bird inserting its bill into a reed, and then blowing through it.

> Then to the water's brink she laid her head,
> And as *a bittern bumps within a reed,*
> To thee, O lake! she said, I tell —
> Dryden. *Wife of Bath,* l. 195.

Chaucer, in his corresponding line, seems to follow another explanation which has been given, that the Bittern thrusts its bill into mud or water, and, after retaining the air awhile, suddenly expels it.

> And as *a bittore bumbleth in the mire.*

* Southey.

Thomson has adopted this explanation: —

As yet the trembling year is unconfined,
And winter oft at eve resumes the breeze,
Chills the pale morn, and bids his driving sleets
Deform the day delightless; so that scarce
The *bittern* knows his time, *with bill engulph'd,*
To shake the sounding marsh.

Seasons: Spring, l. 18.

The sound is now more rationally believed to be the call of love, uttered in that season by the male, in order to invite the female to him.* It cannot, however, be merely the expression of amorous desire, for it is heard at the period of the harvest, and consequently long after the period of reproduction.†

* Markwick on the Birds of Sussex. Linnæan Trans. vol. viii. p. 20.

† Cuvier, vol. viii. p. 492.

BULLFINCH.

(Loxia Pyrrhula.)

Thomson has classed the Bullfinch among the melodious songsters of Spring, and has given it the epithet of "*mellow*," which, in its natural state, it does not merit.

> The blackbird whistles from the thorny bush,
> *The mellow bullfinch* answers from the grove.
> *Seasons: Spring*, l. 602.

Barrington, in his table of the comparative excellence of English singing birds, has not mentioned the Bullfinch, because its wild note, without instruction, is most jarring and disagreeable.* Yarrell, too, makes the same remark, that the notes of the Bullfinch, as heard in a wild state, particularly the louder ones, have no remarkable quality of tone to recommend them; its call-note is, however, soft and

* Pennant, Brit. Zool. vol. i. p. 699.

plaintive: it is principally for its power of imitation that this bird is prized.*

The effect of instruction on this bird is playfully noticed by Cowper, in his lines on the death of Mrs. Throgmorton's Bullfinch: —

Where Rhenus strays his vines among,
The egg was laid from which he sprung;
And though by nature mute,
Or only with a whistle blest,
Well taught, he all the notes express'd
Of flageolet or flute.

* Yarrell's British Birds, vol. i. p. 4.

CUCKOO.

(Cuculus canorus.)

It would seem, that every thing the most monstrous in fable, and most odious and criminal in history, had been carefully sought out, and attributed to these inoffensive birds; and this because men could not discover the secret springs which Nature has employed to give to this species manners, habits, and a mode of life altogether opposite to those of others, and the union of which fixes on the Cuckoos a distinguishing character from all other known animals. It has been believed that the Cuckoo is nothing but a hawk metamorphosed; that the female Cuckoo lays an egg of the same colour as those in the nest where she deposits it; that she will hatch strange eggs, though she will not her own; that she is accustomed to visit the nest where she has deposited her egg, to drive out or devour the young; that the voracity of the young Cuckoo, even when

hardly born, is so great, that it will devour the other nestlings, and the mother also; and that this mother will kill and eat her own offspring.* But though the natural history of the Cuckoo is not yet perhaps perfectly understood, many of these absurdities and erroneous notions (and some of which poetry has kept alive) are removed. Shakspeare, with many others, supposed that the young Cuckoo destroyed, and even devoured, the bird which hatched and reared it.

The hedge-sparrow fed *the cuckoo* so long,
That it had *its head bit off by its young.*
King Lear, act i. sc. 4.

Being fed by us, you used us so
As that ungentle gull *the cuckoo's bird*
Useth the sparrow; did oppress her nest,
Grew, by our feeding, to so great a bulk,
That even our love durst not come nigh your sight,
For fear of *swallowing.*
King Henry IV. Pt. I. act v. sc. 1.

* It has been said that the Cuckoo casts a saliva on plants, which is fatal to them, by the larvæ which it engenders; and that these again prove fatal to the bird, by stinging it under the wing. The fact is, that this pretended saliva of the Cuckoo is nothing but the frothy exudation of a species of cigala. *Cuvier*, vol. vii. p. 519.

Mr. Gisborne seems to countenance the still popular notion, that the parent Cuckoo sucks or destroys the eggs of the bird in the nest of which she deposits her own.

She, who doom'd
Never the sympathetic joy to know,
That warms the mother cowring o'er her young,
A stranger robs, and to that stranger's care
Her egg commits unnatural.
Walks in a Forest: Spring.

The truth, in both these cases, seems to be this, that during the time the hedge-sparrow* is laying her eggs, which generally takes up four or five days, the Cuckoo contrives to deposit her egg among the rest, leaving the future care of it entirely to the hedge-sparrow. This intrusion often occasions some discomposure, for the old hedge-sparrow, at intervals, whilst she is sitting, not only throws out some of her own eggs, but sometimes injures them in such a way that they become addled; so that it frequently happens that not more than two or

* The Cuckoo generally selects the nest of this bird, but sometimes that of the water-wagtail, titlark, yellow-hammer, green-linnet, and whin-chat.

three of the parent bird's eggs are hatched: but she has never been observed to throw out or injure the egg of the Cuckoo. When the hedge-sparrow has sat the usual time, and disengaged the young Cuckoo, and some of its own offspring from the shell, her own young ones, and any of the eggs that remain unhatched, are soon turned out, the young Cuckoo remaining sole possessor of the nest, and sole object of her future care. The early fate of the young hedge-sparrows is a circumstance noticed by others, but attributed to a wrong cause. Some have supposed the parent Cuckoo the author of the destruction; the fallacy of which assertion is evinced by many Cuckoos' eggs having been hatched in the nests of other birds, after the old Cuckoo had disappeared, and by seeing the same fate attend the nestling sparrows as during the appearance of the old Cuckoos in this country.*

The circumstances which follow the hatching of the young Cuckoo are too curious to be omitted here: they are thus related by Mr. Jenner, who

* Philosoph. Trans. vol. lxxviii. pt. 2.

repeatedly witnessed them: in particular, on the 18th of June, 1787, he examined the nest of a hedge-sparrow which then contained a Cuckoo's and three hedge-sparrow's eggs; the day following the bird had hatched, but there remained in the nest only a young Cuckoo and one young hedge-sparrow: the nest was so near the extremity of a hedge, that he could distinctly see what was going forward in it; and with astonishment he saw the young Cuckoo actually turning the young hedge-sparrow out of the nest. The little animal, with the assistance of its rump and wings, contrived to raise the bird upon its back, and making a lodgment for its burthen, by elevating its elbows, clambered backward with it up the side of the nest, till it reached the top, where, resting a moment, it threw off its load with a jerk, and quite disengaged it from the nest. After remaining a short time in this situation, and feeling about with the extremities of its wings, as if to be convinced that the business was perfectly executed, it dropped into the nest again. It is very remarkable, that Nature seems to have provided for the singular dispo-

sition of the Cuckoo, in its formation at this period; for, different from other newly-hatched birds, its back, from the scapula downwards, is very broad, with a considerable depression in the middle, which seems formed by nature for the design of giving a more secure lodgement to the egg of the hedge-sparrow or its young, while the young Cuckoo is employed in removing either from the nest. When it is above twelve days old this cavity is quite filled up, the back assumes the shape of that of nestling birds in general, and at that time the disposition for turning out its companion entirely ceases.

May not these singularities in the Cuckoo be attributed to the short residence the bird is allowed to make in the country where it is destined to propagate its species, and the call that Nature has upon it, during that short residence, to produce a numerous progeny? The same instinctive impulse which directs the Cuckoo to deposit her eggs in the nests of other birds directs her young one to throw out the eggs and young of the owner of the nest. The scheme of nature would be incomplete without it; for it would be extremely difficult, if not

impossible, for the birds destined to find nourishment for the Cuckoo, to find it also for their own young ones after a certain period, nor would there be room for the whole to inhabit the nest.*

* Philosoph. Trans. vol. lxxviii. pt. 2.

FIELDFARE.

(TURDUS PILARIS.)

SIR WALTER SCOTT seems to have been unacquainted with the natural history of this bird; for it does not (as he has described it) visit Great Britain in the summer, nor breed there*, nor make its nest upon the ground.

> Beneath the broad and ample bone,
> That buckled heart to fear unknown;
> A feeble and a timorous guest,
> *The fieldfare framed her lowly nest.*
> *Lady of the Lake*, p. 103.

The Fieldfare is a well-known migratory thrush, that comes to us from the North, and is one of the latest, if not the last, species that makes its annual and regular winter visit to Great Britain and the north of Ireland. It seldom appears much before the beginning of

* White, Nat. Hist. Selborne, vol. i. p. 126—133. Yarrell says, they have been known to breed occasionally in this country.

November, depending on the temperature of the season, and frequently later than that; arriving here in large flocks in search of food, and, if the weather continue open and mild, spreading themselves over pasture lands, to look for worms, slugs, the larvæ of insects, and other soft-bodied animals of that sort; but on the occurrence of snow or frost they betake themselves to the hedges, and feed greedily on haws, and various other berries.

Mr. C. Hewitson, in a recent visit to Norway, made the following interesting observations on the nesting habits of the Fieldfare. After a long ramble through some very thick woods, our attention was attracted by the harsh cries of several birds, which we at first supposed must be shrikes, but which afterwards proved to be Fieldfares, anxiously watching over their newly-established dwellings. We were soon delighted by the discovery of several of their nests, and even surprised to find them (so contrary to the habits of other species of Turdus with which we are acquainted) breeding in society. Their nests were at various heights from the ground, from four feet to

thirty or forty feet, or upwards, mixed with old ones of the preceding year: they were, for the most part, placed against the trunk of the spruce fir; some were, however, at a considerable distance from it, upon the upper surface, and toward the smaller end of the thicker branches; they resembled most nearly those of the ring ouzel: the outside is composed of sticks and coarse grass and weeds, gathered wet, matted together with a small quantity of clay, and lined with a thick bed of fine dry grass: none of them yet contained more than three eggs, although we afterwards found that five was more commonly the number than four; and that even six was very frequent: they are very similar to those of the blackbird, and even more so to the ring ouzel.

The Fieldfare is the most abundant bird in Norway, and is generally diffused over that part which we visited; building, as already noticed, in society, two hundred nests or more being frequently seen within a very small space.*

* Yarrell's British Birds, vol. iii. p. 191.

Mr. Gisborne's winter sketch of these birds is pleasing and correct: —

Lo! on yon branch, whose naked spray o'ertops
The oak's still clustering shade, the fieldfares sit
Torpid and motionless, yet peering round,
Suspicious of deceit. At our approach
They mount, and, loudly chattering from on high,
Bid the wild woods of human guile beware.

Walks in a Forest: Winter, 3.

NIGHT-RAVEN.

(STRIX STRIDULA.)

WE sometimes read in poetry of the *Night Crow* or *Night Raven*, a term evidently translated from the *νυκτικοραξ* of the Greeks, though used, probably, by poets, without any definite meaning, as a creature of the imagination, a bird of ill omen, foreboding danger, misery, and death, and introduced by them to give solemnity to their descriptions.

> And over them sad Horror, with grim hue,
> Did always soar, beating his iron wings ;
> And after him owls and *night-ravens flew*,
> The hateful messengers of heavy things,
> Of death and dolor telling sad tidings.
>
> SPENSER. *Fairy Queen*, b. ii. c. 7. st. 23.

> Even all the nation of unfortunate
> And fatal birds about them flocked, were
> Such as by nature men abhor and hate;
> The ill-fate owl, death's dreadful messenger;
> *The hoarse night-raven, trump of doleful drere;*
> The leather-winged bat, day's enemy;

The rueful Strick, still waiting on the bier;
The whistler shrill, that whoso hears must die;
The hellish harpys, prophets of sad destiny.
Fairy Queen, b. ii. c. 2. st. 36.

The owl shrieked at thy birth, an evil sight;
The night-crow cried, foreboding luckless time;
Dogs howl'd, and hideous tempests shook down trees.
SHAKSPEARE. *K. Henry VI. Pt. III.* act v. sc. 6.

I pray his bad voice bode no mischief;
I had as lief have heard *the night-raven*,
Come what plague would have come after it.
M. Ado ab. Noth. act ii. sc. 3.

By the screech-owl's dismal note,
By the black night-raven's throat,
I charge thee, Hob! to tear thy coat
With thorns, if thou come near us.
DRAYTON. *Nymphidia.*

Three times, all in the dead of night,
A bell was heard to ring;
And at her window, *shrieking thrice*,
The raven flapp'd his wing.
TICKEL. *Lucy and Colin.*

If, however, a particular bird be intended, it should seem an error to suppose it, as in some of the above passages, any other than a species of owl; probably the brown, or screech-owl, *Strix stridula:* this, at least, is the opinion of the author of the Histoire des Oiseaux. The

Greeks, then (he writes), will not have named Nycticorax, *i. e.* the Night-raven, such birds as, having yellow or blue eyes, and white or grey plumage, bear no relation to the Raven; and they will have given that name with just reason to the *Hulote**, the only one of all those nocturnal birds which has black eyes, and plumage very nearly black, and which approaches the Raven much nearer than any other by its size. There is yet another reason which adds probability to my interpretation; it is, that the Nycticorax among the Greeks, and even among the Hebrews, was a common and well-known bird, since they borrowed comparisons from it, (*sicut nycticorax in domicilio*). It is impossible to imagine, as most of those *literateurs* believed, that it was a bird so solitary and so rare, that its species cannot, at this day, be discovered. The *Hulote* is common enough every where; it is of all the owls (*Chouettes*) the largest, the blackest, and the most like the Raven; all the other species are totally different.†

* La Hulote of Buffon, vol. i. p. 358, is the Strix stridula of Linn. Syst. 133., and the brown owl of Pennant, Zool. vol. i. p. 210.

† Vol. i. p. 326.

OSTRICH.

(Struthio Camelus.)

The natural history of Sacred Writ must, from several causes, especially through the medium of a translation, be often imperfectly understood. Some mistakes relative to the Ostrich have thus, perhaps, been occasioned by the well-known description in the book of Job *, —her stupidity,—hatching her eggs by the heat of the sun — and want of affection for her young.

> The *ostrich, silliest* of the feather'd kind,
> And form'd by God *without a parent mind,*
> Commits her egg incautious to the dust,
> Forgetful that the foot may crush the trust.
>
> Cowper. *Tyrocinium,* v. 2.

> Who in the *stupid* ostrich has subdued
> *A parent's care* and *fond inquietude?*
> *While far she flies,* her scatter'd eggs are found,
> *Without an owner,* on the sandy ground;

* Job, xxxix. 13.

Cast out on fortune, they at mercy lie,
And borrow life from an indulgent sky;
Adopted by the sun, in blaze of day,
They ripen under his prolific ray:
Unmindful she, that some unhappy tread
May crush her young on their neglected bed;
What time she skims along the field with speed,
She scorns the rider and pursuing steed.

YOUNG. *Paraphrase of Job*, v. 4. p. 135.

The Ostrich appertains exclusively to the ancient continent. The sandy deserts of Arabia are the places in which it has established its habitual sojourn. It is found from Egypt and Barbary, as far as the Cape of Good Hope, and in the neighbouring islands, and those parts of Asia which border on the African continent. This bird has, in general, been made the emblem of stupidity; and it has been said, that when it hides its head, and cannot see the hunter, it believes itself sheltered from his pursuit. Supposing such a fact to have been really observed, might it not have occurred when an Ostrich was exhausted from fatigue, and without means of escape, and result from its own knowledge of the peculiar weakness of one of its organs? With the exception of the vertex, which is

fortified with a corneous plate, the bones of the Ostrich's head are very tender. Many circumstances may produce in the bird the feeling of its weakness in this respect; and it is not at all astonishing that it should particularly seek to guard this part against any shock, either by hiding it in the sand, or elsewhere. If no other proofs of stupidity can be brought against the bird, we doubt if this one can be admissible as conclusive against its intellect. It seems rather to be attributable to the extreme timidity and mild character of the animal.*

The Ostriches, properly speaking, make no nest; they hollow out a place upon the sand, where they deposit their eggs. Under the torrid zone, the heat of the sun during the day dispenses them from the cares of incubation, which is performed only during the night; but on either side of the tropics these birds hatch without intermission.

The young ones walk immediately after their birth. As they find in the torrid zone the degree of heat necessary for them, and suit-

* Cuvier, vol. viii. p. 427—429.

able food, the mother abandons them directly; but at the Cape, and in other less warm countries, she continues to afford them her assistance in procuring food, &c. as long as it is necessary, and defends them with no small degree of courage.* She seems to show the same affectionate spirit in defending her eggs. Professor Thunberg relates, that he once rode past the place where a hen Ostrich was sitting; when the bird sprang up, and pursued him, evidently with a view to prevent his noticing her eggs or young. Every time he turned his horse toward her she retreated ten or twelve paces, but as soon as he rode on again she pursued him till he had got to some considerable distance from the place where he first started her.†

* Cuvier, vol. viii. p. 434.

† Thunberg's Travels, vol. ii. p. 242.

PEACOCK.

(PAVO CRISTATUS.)

THE plumage of the Peacock, so justly admired and celebrated in prose and verse, is not, strictly speaking, the *train* or *tail* of the bird, though generally called so.

The gods stand gazing on, when she does ride,
Drawn of *fayre peacocks*, that excel in pride,
And full of Argus eyes, *their tayles* despredden wide.
SPENSER. *Fairy Queen*, b. i. c. 4.

The other, whose *gay train*
Adorns him, colour'd with the florid hue
Of rainbows, and starry eyes.
MILTON. *Par. Lost*, b. vii. l. 444.

Supreme in glittering state,
The *peacock* spreads his rainbow *train*, with eyes
Of sapphire bright, irradiate each with gold.
MASON. *English Garden*, b. iv.

The long feathers which adorn these birds grow, not from their uropygium, but all up their back. A range of short, brown, stiff feathers, about six inches long, fixed in the uropygium, is the *real tail*, and serves as the fulcrum to

prop up the train, which is long, and top-heavy, when set on end. When the train is up, nothing appears of the bird before but its head and neck; but this would not be the case were those long feathers fixed only in the rump, as may be seen by the turkey-cock when he is in a strutting attitude.*

Sometimes we meet with descriptions equally elegant and beautiful, without this inaccuracy.

The peacock spreads
His every-colour'd glory to the sun,
And swims in radiant majesty along.
THOMSON. *Seasons: Spring*, l. 779.

How rich the peacock! what bright glories run
From plume to plume, and brighten in the sun!
He proudly spreads them to the golden ray,
Gives all his colours, and adorns the day:
With conscious state the spacious round displays,
And slowly moves amidst the waving blaze.
YOUNG. *Paraphrase on Job*, v. 4. p. 136.

His state a dignity assumes,
And to the sun displays his plumes;
Which, like the heavens' o'er-arching skies,
Are spangled with a thousand eyes;
The circling rays and varied light
At once confound their dazzled sight.
GAY. *Fable* 11.

* White, Nat. Hist. Selborne, vol. i. p. 156.

PELICAN.

(Pelicanus Onocrotalus.)

The false notion of this celebrated bird's peculiar tenderness for her young, in feeding them with her own blood, has afforded poets an obvious allusion to parental affection: —

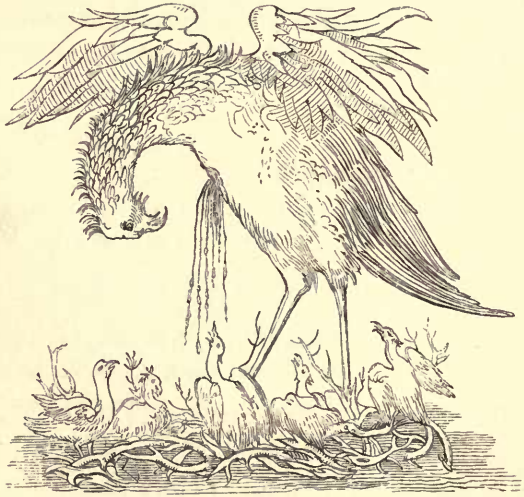
> To his good friends thus wide I'll ope my arms,
> And, like *the kind life-rendering pelican,*
> *Repast them with my blood.*
>
> Shakspeare. *Hamlet,* act iv. sc. 5.

> That blood already, *like the pelican,*
> *Hast thou lapp'd up, and drunkenly caroused.*
>
> *K. Richard II.,* act ii. sc. 1.

> Should discarded fathers
> Have this little mercy on their flesh?
> 'Twas this flesh begot *these pelican daughters.*
>
> *K. Lear,* act iii. sc. 1.

The Pelican is very common in Africa, is found also in America, and in the southern parts of Australia. It is furnished with a neck-pouch capable of containing twenty pints or more of water, which caused it to be called by the Egyp-

tians the *river camel;* and it swallows into this sac, in a single fishing, as much fish as would serve for the repast of six men. After fishing, when their pouch is full, these birds retire to the points of rocks, where they digest in repose, and remain in a state of drowsiness till night. This pouch, which may be considered as an external crop, has not the digestive heat of that



Pelicanus ut vulgo a pictoribus effingitur.

From Gesner.

of other birds, and the fish in it, therefore, remain fresh. To disgorge it to their young, they have occasion only to press the pouch on their breast; and, in all probability, this simple operation has given rise to the tale, that the Pelican opens its bosom to feed its young with its own proper substance.*

It is observable too, that *the colour* of the pouch is *red* or yellowish; and, from seeing the bird empty it, a careless person, ignorant of the matter, might thus be easily mistaken.†

* Cuvier, vol. viii. p. 649—650.

† Latham's Synopsis, vol. iii. pt. 2. p. 579.

REDBREAST.

(MOTACILLA RUBICUNDA.)

GAY's allusion in his sixth Pastoral to the tradition respecting the Redbreast, in the ballad of "The Children in the Wood," deviates both from the peculiar character of the bird, and from the ballad itself, by the use of plural terminations.

> Their gentle corps *the robin redbreasts* found,
> And strew'd with pious zeal the leaves around;
> Ah! gentle *birds!* if this verse live so long,
> Your *names* shall live for ever in my song.
>
> GAY. *Pastoral* 6.

In all seasons the Redbreast preserves its solitary character: like the nightingale, the male Redbreast will suffer no other bird of its own species in the particular district which it has adopted. It pursues the intruder violently the moment it appears, and soon forces it to retire.* Its preference to the society of man (owing,

* Cuvier, vol. vii. p. 11.

perhaps, to a natural boldness in the bird), has given it a claim to our protection, and made it a general favourite. And not in England only; the Irish have a holier legend relating to it. They tell us, that "when our Saviour was suffering, the Robin hovered near the cross, to manifest his duty and affection to the Son of God; he kept close to him unto the end; and when the Lord's side was pierced some of the holy blood sprinkled on the Robin's breast, and the precious symbol was permitted to remain thereon, as a record of his fidelity."* It would not be easy to trace the origin of the Redbreast's supposed affection for mankind, and of the charitable office ascribed to it. Addison long ago noticed its resemblance to a circumstance related by Horace†: —

> Me fabulosæ Vulture in Appulo
> Altricis extra limen Apuliæ
> Ludo fatigatumque somno
> Fronde novâ puerum palumbes
> Texere.
>
> Lib. iii. od. iv. v. 9.

* Lights and Shadows of Irish Life, by Mrs. Hall. vol. iii. p. 189.

† Spectator, No. 85.

In lofty Vulture's rising ground,
Without my nurse Apulia's bounds,
When young, and tired with sport and play,
And bound with pleasing sleep I lay,
Doves cover'd me with myrtle boughs.
CREECH.

We find the tradition, both in prose and verse, early in the seventeenth century, and even earlier. One author tells us, "The Robin-redbreast, if he find a man or woman dead, will cover his face with moss; and some think, that if the body should remain unburied he will cover the whole body."* Another quaintly says, "They that cheere up a prisoner but with their sight, are Robin-redbreasts, that bring strawes in their bils to cover a dead man in his extremitie."† Isaac Walton also, enumerating his "airy creatures," mentions "the Robin, that loves mankind both alive and dead."‡ Our poets have vied with each other in celebrating the pious charity of their little favourite;

* Jackson's Cornucopia, published 1596.

† "Villanies discovered by Lanthorn and Candlelight." A pamphlet by Decker, printed 1616.

‡ Complete Angler, first published 1653, ch. i. p. 9. Sir J. Hawkins's edit.

and all of them, except Gay, note its solitary habits.

> Call for the redbreast and the wren,
> Since o'er shady groves they hover,
> And with leaves and flowers do cover
> The friendless bodies of unburied men.
> WEBSTER. *White Devil*, Tragedy.*

> The charitable robinet in came,
> Whose nature taught the others to be tame.
> DRAYTON. *Noah's Flood*, p. 1537.

> Covering with moss the dead's unclosed eye,
> The little redbreast teacheth charitie.
> DRAYTON. *The Owl*, p. 1291.

> No burial these pretty babes
> Of any man receives,
> Till Robin-redbreast piously
> Did cover them with leaves.
> *Children in the Wood.*†

> With fairest flowers,
> While summer lasts, and I live here, Fidele,
> I'll sweeten thy sad grave: thou shalt not lack
> The flower that's like thy face, pale primrose, nor
> The azur'd hare-bell, like thy veins; no, nor

* Ancient British Drama, 1612., vol. iii. p. 41.

† According to Percy, taken from an old play by Rob. Yarrington, 1601. Ancient Reliques, vol. iii. p. 171. edit. 1794.

The leaf of eglantine, whom not to slander,
Outsweeten'd not thy breath: the ruddock would,
With charitable bill (O bill, foreshaming
Those rich-left heirs, that let their fathers lie
Without a monument!) bring thee all this;
Yea, and furr'd moss besides, when flowers are none,
To winter-ground thy corse.

SHAKSPEARE. *Cymbeline*, act iv. sc. 5.*

The redbreast oft, at evening hours,
Shall kindly lend his little aid,
With hoary moss and gather'd flowers
To deck the ground where thou are laid.

COLLINS. *Dirge in Cymbeline.*

There scatter'd oft, the earliest of the year,
By hands unseen are showers of violets found;
The redbreast loves to build and warble there,
And little footsteps lightly print the ground.

GRAY. *Elegy*, 1. edit.

Now Cawdor's corse he view'd,
With hoary moss and faded leaves bestrew'd:
In days of old, nor yet did we invade
The harmless tenant of the woodland shade;
The crimson-breasted warbler o'er the slain,
While frequent rose his melancholy strain,
With pious care, 'twas all he could, supplied
The funeral rites by ruthless man denied.

HOLE. *Prince Arthur*, b. vii.

* Written, as Malone supposes, in 1605.

ROOK.

(CORVUS FRUGILEGUS.)

THOUGH often written upon, we have no complete natural history of this interesting and social bird, whose note and appearance so often fill the mind with ideas of "vernal delight." But that it is not, however, the farmer's enemy (as has been supposed), is the decided opinion of modern naturalists.

> But still unsafe the big swoln grain below,
> *A favourite morsel with the rook and crow;*
> From field to field the flock increasing goes,
> *To level crops' most formidable foes.*
>
> BLOOMFIELD. *Farmer's Boy: Spring*, l. 103.

What distinguishes the Rook from the crow is the bill; the nostrils, chin, and sides of that, and the mouth, being, in old birds, white and bared of feathers, by often thrusting the bill into the ground in search of the *erucæ* of the Dorr Beetle (*Scarabæus Melolontha*). The Rook, then, instead of being proscribed, should be

treated as the farmer's friend, as it clears his ground from caterpillars, that do incredible damage by eating the roots of the corn. This is the opinion of Pennant.*

The Rook has found an able advocate also in Bewick. Birds of the Pie kind (he observes) are found in every part of the known world, from Greenland to the Cape of Good Hope; and though generally disliked for their disgusting and indiscriminating voracity, yet, in many respects, they may be said to be of singular benefit to mankind, not only by devouring putrid flesh, but principally by destroying great quantities of noxious insects, worms, and reptiles. Rooks, in particular, are fond of the *erucæ* of the hedge-chafer, or chesnut-brown beetle, for which they search with indefatigable pains. Rooks are often accused of feeding upon corn just after it has been sown, and various contrivances have been made both to kill and frighten them away; but, in our estimation, the advantages to be derived from the destruction they make among grubs, earth-

* Brit. Zool. vol. i. p. 222.

worms, and noxious insects of various kinds, will greatly repay the injury done to the future harvest, by the small quantity of corn they may destroy in searching for their favourite food.*

This view of the subject has been further supported by Yarrell with some curious facts. The balance (he writes) between injury and benefit derived from Rooks by the agriculturist is a question which general opinion seems to have settled by considering, that the occasional injury is much more than counterbalanced by the amount of benefit conferred in the consumption of thousands of destructive grubs of the common cockchafer, the wire-worms of several sorts, and, as mentioned by Mr. Selby, the larvæ also of the insect commonly known by the name of *Harry-Longlegs*. These, and probably many others equally injurious to vegetation, are searched for and devoured with avidity, forming a very large proportion of the food of this most numerous species. Early in the morning Rooks visit meadow land while the grass is yet wet with dew, to break their

* Bewick Hist. Brit. Birds, vol. i. p. 63.

fast on worms and slugs, which the moisture of that period induces to crawl forth. Later in the day, they may be seen either searching newly-ploughed ground for the various insects there exposed, or again visiting pastures for other purposes. There they are accused of destroying the grass by pulling it up by the roots: but it has been stated, and, as I believe truly, that this is an error, arising out of the following circumstance. — In searching for grubs which are concealed in the earth, and supported by eating the roots of the grass, the Rook pulls at the blade of grass with its bill, and when the grass comes up readily the bird knows that there are under it insects which have destroyed its roots, and in this way detects them; but if the blade of grass is firm the Rook goes to another part of the ground. In the field where grubs are abundant, the Rooks scatter the grass every where, so as to give the appearance of having rooted it up, while they have only exposed the depredations of the insects by which the roots have been destroyed. The author of the Journal of a Naturalist, speaking of the readiness with

which Rooks detect the places where grubs are sure to be found, says, "I have often observed them alight on a pasture of uniform verdure, and exhibiting no sensible appearance of feathering or decay, and immediately commence stocking up the ground. Upon investigating the object of their operations, I have found many heads of plantains, the little autumnal dandelions, and other plants drawn out of the ground, and scattered about; their roots having been eaten off by a grub, leaving only a crown of leaves upon the surface." It may readily be supposed, that extensive injury at the root of a plant cannot exist long without some alteration in the appearance of the leaves, or other parts above ground; and the Rooks seem to have learned from experience how to select those plants which are the most likely to afford them some recompense for the trouble they take in grubbing them up. Mr. Jesse, in his instructive gleanings, says, "A gentleman once showed me a field which had all the appearance of having been scorched, as if by a burning sun, in dry, hot weather: the turf peeled from the ground as if it had been cut with a turfing spade; and

we then discovered that the roots of the grass had been eaten away by the larvæ of the cock-chafer, which were found in countless numbers at various depths in the soil. This field was visited by a great number of Rooks, though there was no rookery within many miles of the neighbourhood, who turned up, and appeared to devour the grubs with great satisfaction." To prove their utility on other occasions, two or three quotations from the Magazine of Natural History, among many others, will suffice. A flight of locusts visited Craven, and they were so numerous as to create considerable alarm among the farmers of the district. They were, however, soon relieved from their anxiety, for the rooks flocked in from all quarters by thousands and tens of thousands, and devoured them so greedily, that they were all destroyed in a short time. It was stated, a few years ago, that there was such an enormous quantity of caterpillars upon Skiddaw, that they devoured all the vegetation on the mountain, and people were apprehensive they would attack the crops in the inclosed lands: but the Rooks, which are fond of high ground in summer, having

discovered them, in a very short time put a stop to their ravages.

The attempts occasionally made by man to interfere with the balance of powers, as arranged and sustained by Nature, are seldom successful. "An extensive experiment appears to have been made in some of the agricultural districts on the Continent, the result of which has been the opinion, that farmers do wrong in destroying Rooks, jays, sparrows, and, indeed, birds in general, on their farms, particularly where there are orchards. In our own country, on some very large farms in Devonshire, the proprietors determined, a few summers ago, to try the result of offering a great reward for the heads of Rooks: but the issue proved destructive to the farms; for nearly the whole of the crops failed for three successive years, and they have been forced to import Rooks and other birds to restock their farms with. A similar experiment was made a few years ago in a northern county, particularly in reference to Rooks, but with no better success; the farmers were obliged to reinstate the Rooks to save their crops. The subject was facetiously com-

mented upon in a pamphlet by one James Stuart Monteath, of Closeburn.

The food of the Rook, as already shown, consists principally of worms and various sorts of insects, which, from the numbers of the birds themselves, must be consumed to an enormous extent. During the farmer's seed-time the newly-sown grain requires to be watched to keep the Rooks away; they will also occasionally steal a few cherries or green walnuts, and, in severe winters, pick holes in turnips and potatoes. There is reason to believe that the visits of Rooks to turnips may be in some degree beneficial. Farmers have suffered great injury of late years, particularly in Hertfordshire and Essex, from the attack of a large brown grub, the larva of a very common grey moth, called the *Corn rustic, Agrotis segetum* of Entomologists; from four to seven of which I have known to be found eating their way into the bulb of one turnip.*

Two poets have provided the Rook with food more suitable to it than the crops of the farmer: —

* British Birds, vol. i. p. 94 — 96.

The rooky tribe attend, and, perch'd at hand,
Watch the moist furrow with superior eye,
And brisk alight, upon the worm to prey,
Or sweeter grub unhoused.

HURDIS. *Fav. Village*, b. iv.

The very rooks and daws forsake the fields,
Where neither grub, nor root, nor earth-nut now
Repay their labours more; and perch'd aloft
By the wayside, or stalking in the path,
Lean pensioners upon the traveller's track,
Pick up their nauseous dole, though sweet to them,
Of voided pulse, or half-digested grain.

COWPER. *The Task*, b. v.

SWALLOW.

(Hirundo.)

There exists a general prejudice in favour of the Swallow tribe; and many persons hold it fortunate to have them build in their houses, and equally the forerunner of misfortune to molest or injure them. This superstitious regard Sir Thomas Brown supposes to be a relic of Paganism *; since we learn from Ælian, that these birds were sacred to the household gods†, and therefore were preserved; and from Athenæus, that the Rhodians had a solemn song to welcome the arrival of the Swallow‡— Grose thinks it is considered a breach of hospitality to hurt or refuse them protection,

* Pseudodoxia Epidemica, p. 317.

† The Swallow is sacred to the household gods, and to Venus, who is one of them. Ælian, b. x. c. xxxiv.

‡ It began thus:—"The Swallow is come! is come! with plumage black above and white beneath, the herald of fair seasons and happy years," &c. Athenæus, Deipn. b. viii. ch. xv.

because they take refuge in our houses.* The Martin has been said to be domestic from instinct, seeking the society of man, in spite of all its inconveniences, in preference to all others. This opinion, however, has been opposed by Spallanzani, who would refer the nidification of these birds, in a chimney and the window corners, more to the convenience afforded by this angle to the bird, for the purpose, than to any predilection for human society. Nor does there seem to be any other circumstance from which we may reasonably conclude in favour of the instinctive propensity of this bird for the society of man than that of its attaching its nests to our dwellings; and this must be limited in extent: the architecture of Africa cannot afford similar conveniences to these birds during their absence from Europe. But a still stronger plea may be urged for our preserving them† — *their usefulness.* The Hirundines are a most inoffensive, harmless, entertaining, social, and useful tribe of birds: they touch no fruit in our gardens; delight all, except one species, in

* Grose on Popular Superstitions, p. 54.

† Cuvier, Anim. King. vol. vii. p. 89.

attaching themselves to our houses; amuse us with their migrations, songs, and marvellous agility; and clear our outlets from the annoyance of gnats, and other troublesome insects. Whoever contemplates the myriads of insects that sport in the sun-beams of a summer evening, in this country, will soon be convinced to what a degree our atmosphere would be choked with them, was it not for the friendly interposition of the Swallow tribe.*

Our poets have shown their fondness for these useful and interesting little birds in several beautiful pictures of their economy.

How welcome to the sight, when first discern'd,
The vernal swallow, skimming with swift wing
The windy mead, or floating high in air
If noon be calm, or twitt'ring lonely song,
Perch'd on the brink of chimney-throat profound!
How sweetly falls it on th' attentive ear,
Reviving memory of summers past,
And many a sweet and pleasurable thought
Of sultry days enjoy'd and mused away
Beneath the garden shade, while thus she sang
And warbled freely from her household nest!

HURDIS. *Favourite Village*, b. iv.

* Nat. Hist. Selborne, vol. i. p. 263., Markwick's edt.

The chimney-haunting swallow, too, my eye
And ear well pleases; I delight to see
How suddenly he skims the glassy pool,
How quaintly dips, and with a bullet's speed
Whisks by. I love to be awake, and hear
His morning song twitter'd to young-eyed Day.
HURDIS. *Village Curate.*

The guest of summer,
The temple-haunting martlet, does approve,
By his lov'd masonry, that heaven's breath
Smells wooingly here. No jutting frieze,
Buttress, or coigne of vantage, but this bird
Hath made his pendant bed and procreant cradle:
Where they most breed and haunt, I have observed
The air is delicate.
SHAKSPEARE. *Macbeth*, act i. sc. 8.

Whence drew the martin his superior skill,
To kneed and tamper, mason-like, the slime
Of street or stagnant pool, and build aloft,
Beneath the cornice brink or shady porch,
His snug depending house, on nothing hung,
Founded in air, and finish'd with a neat
Convenient aperture, from whence he bolts
Sudden, and whither brisk returns, with mouth
Fill'd for his hiant offspring.
HURDIS. *Favourite Village*, b. iv.

See through the fractur'd pediment revealed,
Where moss inlays the rudely-sculptured shield,

The martin's old hereditary nest.*
Long may the ruin spare its hallow'd guest!
ROGERS. *Pleasures of Memory*, b. i.

When autumn scatters his departing gleams,
Warn'd of approaching winter, gather'd, play
The swallow people; and toss'd wide around
On the calm sky, in convolution swift
The feather'd eddy floats; rejoicing once
Ere to their winter slumbers they retire;
In clusters hung beneath the mould'ring bank,
And where, unpierced by frost, the cavern sweats;
Or rather into warmer climes convey'd,
With other kindred birds of season: there
They twitter cheerful, till the vernal months
Invite them welcome back; for, thronging now,
In numerous wings are in commotion all.
THOMSON. *Seasons: Autumn*, l. 747.

To the foregoing descriptions may be added one of the Goatsucker (*Caprimulgus Europæus*†) which Klein has placed in the Swallow tribe, and which has most of the characters of that genus. It feeds on nocturnal insects; its

* The astonishing fact, that the same pair return to their nest for successive years, has been repeatedly proved by the simple experiment of tying a silken thread to the leg of the birds, and thus ascertaining their return. Cuvier, vol. vii. p. 89.

† Called also *night jar*, *dor hawk*, *fern* or *churn owl*.

loudest note resembles the noise of a large spinning-wheel, and is so very violent as to give a sensible vibration to any little building it chances to alight on.*

Hark! from yon quiv'ring spray, your direst foe,
Insects of night, its whirring note prolongs,
Loud as the sound of busy maiden's wheel;
Then with expanded beak, and throat enlarged
Even to its utmost stretch, its customed food
Pursues voracious.

GISBORNE. *Walks in a Forest: Summer.*

* Pennant, Brit. Zool. vol. i. p. 416.

WILD SWAN.

(CYGNUS MUSICUS.)

EVERY one has heard of the supposed musical voice of the Swan, which was believed to be particularly exerted during its latest hours, when it reclined on the bank of its native waters, and took leave of life with a sweetly mournful song or dirge.*

What did thy song bode, lady?
Hark! canst thou hear me? I will play *the swan,*
And die in music.

SHAKSPEARE. *Othello,* act v. sc. 2.

Let music sound, while he doth make his choice;
Then, if he lose, he makes a *swan-like end,*
Fading in music.

Merchant of Venice, act iii. sc. 2.

I am the cygnet to this pale faint *swan,*
Who chants a doleful hymn to his own death.

King John, act v. sc. 7.

* Shaw, Zool. Lect.

Thus on Meander's flowery margin lies
The expiring swan, and as he sings, he dies.
POPE. *Rape of the Lock*, c. 5.

The Whistling Swan, Lath. (Anas Cygnus), is the species to which the ancients attributed so melodious a voice. But this opinion, however accredited, was not universal. It was contested by Lucian, Pliny, and Ælian; and even Virgil speaks only of the disagreeable cries of the Swan.* Yet so strangely was this idea impressed on the minds of some, that the Swan became the symbol of poetry; but, false as it really is, it seems to have had its excuse, and to have originated from some exaggerated description of the natural notes of the Wild Swan, the flocks of which, during their flight, have been often observed to emit a sound far from unpleasing in concert, though the general notes of a single bird are harsh and stridulous.†

Another explanation has been suggested by Sonnini, from observing that the wings of the Swan, when in motion, produce a sonorous and

* Cuvier, vol. viii. p. 660.
† Shaw, Zool. Lect.

harmonious sound, which may be heard at a considerable distance: and it is to this he is inclined to attribute the ancient fable respecting its song.*

The tame Swan has no other voice than a mere hiss; yet so common appears to have been the general belief of its musical powers, that the celebrated Aldrovandus, in his Ornithology, speaks, as he imagines, from good authority, of the music of the Swans upon the Thames, which, he had been well assured, were very frequently heard to sing.†

This tale seems now to be discarded, and the various beauties of the bird itself have been more judiciously chosen for the subject of poetical description.

* Cuvier, vol. viii. p. 658.

† Shaw, Zool. Lect.—Sir Thomas Brown thus quaintly concludes his examination of this subject: "When, therefore, we consider the dissension of authors, the falsity of relations, the indisposition of the organs, and the immusical notes of all we have ever beheld or heard of, if generally taken, as comprehending all swans of all places, we cannot assent thereto. Surely he that is bit with a Tarantula shall never be cured by the music; and with the same hopes we may expect to hear the harmony of the spheres."—*Pseud. Epidem.* p. 198. edit. 1672.

The swan, with archèd neck
Between her white wings proudly mantling, rows
Her state with oary feet; yet oft they quit
The dank, and, rising on stiff pennons, tower
The mid aërial sky.

MILTON. *Par. Lost*, b. vii. l. 437.

The stately-sailing swan
Gives out his snowy plumage to the gale,
And, arching proud his neck, with oary feet
Bears forward fierce, and guards his osier isle,
Protective of his young.

THOMSON. *Seasons: Spring*, l. 775.

The swan, with feet well-webb'd, his dextrous oar,
And self-admiring, sails in conscious state;
His archèd neck, and snowy bosom swell
Light on the emerald wave.

BIDLAKE. *The Sea*, l. 618.

REPTILES.

BASILISK.

(LACERTA BASILISCUS.)

MODERN naturalists assert, that none of the Lizard tribe are venomous *: they were formerly, however, regarded as being severely so; Shakspeare has armed them with formidable power: —

> Like a foul misshapen stigmatick
> Mark'd by the destinies to be avoided,
> Like venom'd toad, or *lizards' dreadful stings.*
> *K. Henry VI. Pt. III.* act ii. sc. 2.

> Their chiefest prospect murdering basilisks,
> Their softest touch *as smart as lizards' stings.*
> *K. Henry VI. Pt. II.* act iii. sc .2.

The most marvellously destructive lizard was the Basilisk, which, ancient authors have said, had the power of striking its victim dead by a

* Cuvier, vol. ix. p. 208. Pennant, Brit. Zool. vol. ii. p. 22.

single glance. Our immortal bard has repeated allusions to this surprising faculty : —

Make me not *sighted like the basilisk ;*
I've looked on thousands who have sped the better
By my regard, but *kill'd none so.*
Winter's Tale, act i. sc. 2.

Look not upon me, for your eyes are wounding ;
Yet do not go away : come, *basilisk,*
And *kill the innocent gazer with thy sight.*
K. Henry VI. Pt. II. act iii. sc. 6.

Your eyes, which hitherto have borne in them,
Against the French that met them in their bent,
The fatal balls of murdering basilisks.
K. Henry V. act v. sc. 2.

O, no, no, no, 'tis true ; here, take this too,
It is a *basilisk unto mine eye ;*
Kills me to look on't.
Cymbeline, act ii. sc. 4.

I'll *slay more gazers than the basilisk.*
K. Henry VI. Pt. III. act iii. sc. 2.

The Basilisk of the ancients is a fabulous existence, to be found only in the representations of painters and poets. The animal known in modern natural history by this name, is a species of lizard of a singular shape, and particularly

distinguished by a *crest* *, which predominates along the entire back. It is a perfectly harmless animal, and a native of South America.†

* Pope's epithet is therefore correctly appropriate,

The *crested basilisk* and speckled snake.

Messiah.

† Shaw, Nat. Miscel. vol. iv. pl. 142. Cuvier, vol. ix. p. 227.

CHAMELEON.

(LACERTA CHAMELEON.)

THE Chameleon has been known from all antiquity, and has been long celebrated for its supposed faculty of living upon air, and changing colour according to the bodies to which it approximates. This mistaken supposition has found its way, in several instances, into poetry.

> As *the chameleon, who is known*
> *To have no colour of his own,*
> *But borrows from his neighbour's hue*
> His white or black, his green or blue,
> And struts as much in ready light,
> Which credit gives him upon sight.
>
> PRYOR. *Poems*, p. 177., edit. 1709.

> No living thing, whate'er its food, feasts there,
> But *the chameleon, who can feast on air.*
>
> CHURCHILL. *Prophecy of Famine.*

> While I, *condemned to thinnest fare,*
> Like those I flatter, *live on air.*
>
> GAY. *Fable 7.*

Stretch'd at its ease, the beast I view'd,
And *saw it eat the air for food.*
MERRICK. *Fable, The Chameleon.*

On that hope
I build my happiness, I live upon it,
Like *the chameleon, on its proper food,*
The unsubstantial air.
HURDIS. *Sir Thomas More,* act ii.

Observation, at the present day, has done justice to these fables, of which this animal is the object. The colours of the Chameleon do, in fact, change with equal frequency and rapidity; but it is by no means true, that they are determined by those of surrounding objects. Their shades depend upon the volition of the animal, on the state of its feelings, on its good or bad health, and are, besides, subordinate to climate and to sex. It was observed by Pliny, that no animal was so timid as the Chameleon, and, in fact, having no means of defence, and being unable to secure its safety by flight, it must frequently experience internal fears and agitations more or less considerable. Its epidermis is transparent, its skin yellow, and its

blood of a very lively blue violet. From this it results, that when any passion or impression causes any blood to pass from the heart to the surface of the skin and to the extremities, the mixture of blue violet and yellow produces more or less a number of different shades. Accordingly, in its natural state, when it is free and experiences no inquietudes, its colour is a fine green, with the exception of some parts, which present a shade of reddish brown or greyish white. When in anger, its colour passes to a deep blue green, to a yellow green, and to a grey more or less blackish. If it is unwell, its colour becomes yellowish grey, or that sort of yellow which we see in dead leaves. Such is the colour of almost all the Chameleons which are brought into cold countries, and all which very speedily die. In general, the colour of the Chameleons is so much the more lively and variable, as the weather is warmer, and as the sun shines with greater brilliancy. All these colours grow weaker during the night. Chameleons live on insects, and principally on flies; they seize them with vivacity by means

of their long and gluey tongues, and bruise them between their jaws. Like other reptiles, they can remain for months without eating, which has given rise to the opinion that they live on air.*

* Cuvier, vol. ix. pp. 232. 234, 235.

COMMON SNAKE.

(Coluber Natrix.)

Reptiles appear to excite general aversion and disgust; and their hideous deformity, gloomy haunts, the venomous bite of some, and the terrifying sounds which others emit, render them a proscribed and persecuted race of animals. Early education too may, in some degree, contribute to make the serpent tribe especially obnoxious. Hence the strong prejudice which exists against the *common Snake*, and the still received opinion that it is venomous. It finds little favour in poetry, and is rarely introduced.

As *the snake*, roll'd on a flowery bank,
With shining checker'd slough, *doth sting a child*,
That for the beauty thinks it excellent.
K. Henry VI. Pt. II. act iii. sc. 1.

This Snake is found throughout all Europe, on the banks of fresh waters, in meadows, and on the borders of woods. It is vulgarly called

the Water-Snake. It may be handled without fear, for it never tries to bite, except when exceedingly irritated, and its bite is not at all dangerous.

These reptiles never eat fruit in gardens, nor suck the milk of cows, in the fields or stalls, as some visionary shepherds or impostors have pretended, whose tales have nevertheless spread this absurd prejudice throughout Europe.

The Snake tribe, according to their species, feed on living animals, insects, worms, batrachians, mollusca, small fish, birds, quadrupeds, &c.*

Hurdis has noticed the harmless character of the common Snake: —

> Midst the fresh tops
> Of nettles fast reviving, or green shoots
> Of parsley welcome at the warren side,
> Or sear grass unconsumed, or prickly goss,
> Wriggles the viper, or the basking eft,
> *Or spotted snake innocuous,* snapping short
> The thread of meditation, as they glide
> With whisper not unwelcome.
>
> *Favourite Village,* b. iv. p. 154.

* Cuvier, vol. ix. p. 332.

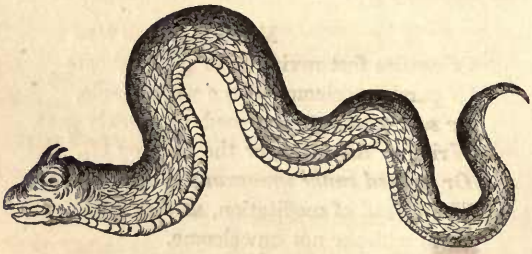
CERASTES.

(Coluber Cerastes.)

The epithet "*horn'd,*" which Milton has applied to this reptile, is only poetically true.

Cerastes horn'd, Hydrops and Elops drear.
Par. L. b. x. l. 525.

It was probably suggested to him by the descriptions of ancient authors, or the figures he met with in the works of old naturalists.



Cerastes. From Gesner.

It attains the length of about two feet. It has received its name from the Greek word

κέρας, in consequence of the eminences which surround its eyes, and which, from the most ancient times, have most erroneously been compared to the horns of mammiferous animals. The resemblance of these eminences to a grain of barley, most probably gave rise to the fable recounted by Pliny and Solinus, who tell us that the Cerastes, concealing in the earth, or under leaves, the rest of their body, put these little horns in motion to attract the birds which they want to devour. At the present day, when this reptile has been examined by observers of sound, unprejudiced judgment, the bite of the Cerastes is regarded as very dangerous.*

* Cuvier, vol. ix. pp. 369, 370.

SALAMANDER.

(LACERTA SALAMANDRA.)

THAT the Salamander can live in fire, is an erroneous opinion, which should be generally known, for the sake of the harmless reptile, which it has probably subjected to many a cruel experiment.

> I would not, *salamander-like,*
> *In scorching heat* always desire *to live;*
> But, like a martyr, pass to heaven through fire.
> COWLEY, *The Gazers,* v. 1. p. 100.*

This animal, so long the subject of popular error, and of which so many idle tales have been related by the ancient naturalists, is an inhabitant of many parts of Germany, Italy, and France, but does not appear to have been discovered in England. On each side of the head are situated a pair of large tubercles: these parts, as well as the back and sides of the body,

* Aikin's edit. 1806.

are beset with several large open pores or foramina, through which exudes a peculiar fluid, serving to lubricate the skin, and which, on any irritation, is secreted in a more sudden and copious manner, under the form of a whitish gluten, of a slight acrimonious nature; and from the readiness with which the animal when disturbed appears to evacuate it, and that even occasionally to some distance, has arisen the long-continued popular error of the Salamander being enabled to live uninjured in the fire; which it has been supposed capable of extinguishing by its natural coldness and moisture. The real fact is, that like any of the cold glutinous animals, as snails, &c., it, of course, is not quite so instantaneously destroyed by the force of fire as an animal of a drier nature would be.*

* Shaw, Gen. Zool. vol. iii. pt. 1. p. 291.

SLOW-WORM.

(ANGUIS FRAGILIS.)

THIS reptile has commonly received the appellation of *blind-worm;* its eyes, from their minuteness, not being easily discernible: it has also been supposed venomous, — an opinion still held by some.

> Adder's fork, and *blind-worm's sting,*
> Lizard's leg, and owlet's wing,
> For a charm.
>
> *Macbeth,* act iv. sc. 1.

> Whose self-same mettle
> Engenders the black toad, and adder blue,
> The gilded newt, and *eyeless venom'd worm.*
>
> *Timon of Athens,* act iv. sc. 3.

The Slow-Worm, when seized, stiffens itself with such violence, that, according to Laurenti and other naturalists, it sometimes breaks in two, and this peculiarity, united to the great fragility of its tail, causes it, in many countries, as well as the *Ophisaurus ventralis,* to receive

the name of *glass serpent.* It is an extremely mild and perfectly innoxious animal; and no more merits the reputation of being poisonous than of being blind, which the vulgar in some countries have persevered in calling it, in defiance of their senses. It not unfrequently becomes the prey of hens, ducks, geese, swans, hedgehogs, adders, frogs, and large toads.*

* Cuvier, vol. ix. p. 306.

TOAD.

(Rana Bufo.)

It was formerly supposed that in the head of the Toad was to be found a stone possessing great medicinal virtues.*

> Sweet are the uses of adversity;
> Which, like the toad, ugly and *venomous,*
> *Wears yet a precious jewel in his head.*
> Shakspeare. *As you like it,* act ii. sc. 1.

The stone, however, distinguished by the name of the reptile, and called *Toad-stone, Crapaudine, Krottenstein,* has been discovered to be nothing but the fossil tooth of the sea-wolf, or some flat-toothed fish not unfrequent in our island, as well as several other countries.†

That the Toad is also venomous, was an opinion prevalent in the time of Shakspeare and Milton, and is still believed by many.

* This stone was believed to be an antidote to poison, and a perfect remedy for the stone. Gesner, De Quadruped. Ovip. p. 65.

† Pennant, Brit. Zool. vol. iii. p. 16.

Toad, that under the cold stone,
Days and nights has thirty-one,
Swelter'd venom sleeping got,
Boil thou first i' the charmed pot.
Macbeth, act v. sc. 1.

Like a foul misshapen stigmatick,
Mark'd by the destinies to be avoided,
Like *venom'd toad.*
K. Henry VI. Pt. III. act ii. sc. 2.

Him they found,
Squat *like a toad*, close at the ear of Eve,
Assaying with his devilish art to reach
The organs of her fancy, and with them forge
Illusions as he list, phantasms and dreams;
Or if, *inspiring venom*, he might taint
The animal spirits that from pure blood arise.
Par. Lost. b. iv. l. 799.

Modern naturalists are unanimous and decided in rejecting this opinion. They assure us, that the fluid which exudes from some parts of the body of the Toad is harmless, and that its bite occasions no great inconvenience, merely producing, at times, a slight inflammation*; that they have been eaten without the least injury, and are the common food of buzzards,

* Cuvier, vol. ix. p. 457.

owls, Norfolk plovers, ducks, and snakes, who would not touch them were they in any degree noxious; and that, so far from being hurtful and offensive, they are incapable of self-defence.*

In the Gentleman's Magazine for July 1823 is inserted a correspondence between that late distinguished naturalist Sir Joseph Banks and a clergyman in Lincolnshire†, which sets this subject in a pleasing point of view. The following are extracts: "I have from my childhood," writes Sir Joseph, "in conformity to the precepts of a mother void of all imaginary fear, been in the constant habit of taking Toads in my hand, holding them there some time, and applying them to my face and nose, as it may happen. My motive for doing this very frequently is to inculcate the opinion I have held, since I was taught by my mother, that the Toad is actually a harmless animal; and to whose manner of life man is certainly under some obligation, as its food is chiefly those insects which devour his crops, and annoy him in various ways. To treat such an animal with

* Pennant, Brit Zool. vol. iii. p. 17.

† Rev. S. Hopkins, of Morton, near Bourn.

cruelty, and to regard it with disgust, I have always considered as a vulgar error, and have thought it an act of humanity, worthy the practice of a contemplative man, to convince his neighbours, by every means in his power, that a helpless, harmless creature ought rather to be regarded with complacence and kindness than with disgust and terror, and consequent persecution.

" That Nature has provided mankind with an instinctive aversion to the Toad, I must also doubt. Instincts I believe to be generally bestowed on all individuals of the species to whom Nature has kindly imparted them, and to be guides much more unerring than the deductions of reasons. In my own person I certainly never entertained the least fear of a Toad, as the animal was presented to me when very young, as a harmless creature: and I believe you will not find a single child who cries and shrinks from a Toad, unless he has been taught to fear it.

" If you, sir, could so far conquer the aversion you have imbibed for this harmless reptile as to cause one to be put into a cage, if properly

provided with a damp corner, lined with mat, and properly kept clean, it will live happily and comfortably a long time. Feed it once a day with earth-worms, maggots, or flies, of all which it is very fond. I conceive that the workings of your reason would soon gain a victory over your prejudice if you could conquer your first disgust, and look at the animal with any kind of indifference. The eye of the Toad would first attract your attention, which is brilliant and intelligent: his actions in seizing and securing his prey, which is composed of a mixture of force and cunning, would amuse you: and I am confident, if the first prejudice were subdued, that, in one week's time, a Toad would become an object of amusement instead of disgust, and be regarded in future as a friend rather than an enemy. A friend of Lincolnshire he certainly is, for he never fails to seize and devour every midge that comes within his reach." *

* Gent. Mag., July 1823., p. 11.

MAMMALIA.

BEAR.

(Ursa Arctos.)

The plays of Shakspeare are a storehouse of incorrect zoology; and they show the imperfect state of the science at the time he wrote. He has, in one instance, alluded to the strange, and now discarded, fiction of the ancients, that the cubs of the Bear are born nearly shapeless masses, gradually licked into regular form by their dam: —

> To disproportion me in every part,
> Like to a chaos, or *an unlicked bear-whelp*
> *That carries no impression of his dam.*
> *K. Henry VI. Pt. III.* act iii. sc. 2.

On this subject the learned Sir Thomas Brown has a chapter in his *Pseudodoxia Epidemica*, and observes, that we have the testimony of three authentic philosophers in confutation of the notion: first, of Mathiolus, who, in his comment on Dioscorides, affirms, that in a newly-

killed Bear, which he saw opened, the young were distinct in all their limbs; secondly, of Julius Scaliger, who affirms the same thing of one killed by some hunters on the Alps; and, lastly, of Aldrovandus, who informs us, that in the museum at Bologna there was, in his time, the fœtus of a Bear preserved in spirits, and which was as completely formed as that of other animals.

The young, however, though not shapeless, have a different aspect from the grown animal; the snout being much sharper, and their colour yellowish. They are said to be blind for nearly a month.*

* Shaw, Gen. Zool. vol. i. pt. 2. p. 450.

JACKAL.

(Canis aureus.)

The Jackal has been popularly, but erroneously, termed the Lion's Provider; being supposed to hunt up wild animals for the lion to catch and devour.

> Be you *the lion to devour the prey,*
> *I am your jackal to provide for you.*
> There will be a bone for me to pick.
> Dryden. *Limberham,* act i. sc. 1.

> Meantime the Belgians tack upon our rear,
> And raking chase-guns thro' our sterns they send;
> Close by their fire-ships *like jackals appear,*
> *Who on their lions for their prey attend.*
> Dryden. *Annus Mirabilis,* st. 82.

The Jackal inhabits, in troops, a great part of Asia and Africa, from India and the environs of the Caspian Sea, as far as Guinea. It is a voracious animal, which hunts after the manner of a dog.*

* Cuvier, vol. ii. p. 42.

The explanation of the fiction seems to be this: — The voice of the Jackal is described as peculiarly hideous, consisting of a kind of mixed nature — of howling and indistinct barking. These animals, frequently going in great troops to hunt their prey, by their dreadful yellings alarm, and put to flight, deer, antelopes, and other timid quadrupeds; while the lion, instinctively attending the clamour, is said to follow till the Jackal has hunted down the prey, and having satiated himself, leaves only the mangled remains to be devoured by the Jackal.*

* Shaw, Gen. Zool. vol. i. pt. 2. p. 305.

HYÆNA.

(Canis Hyæna.)

It has been generally asserted and believed that the Hyæna is not capable of being tamed; and Thomson has given the animal this character: —

> The tyger darting fierce,
> Impetuous on the prey his glance has doom'd;
> The lively shining leopard, speckled o'er
> With many a spot, the beauty of the waste;
> And, *scorning all the taming arts of man,*
> The keen *hyæna,* fellest of the fell.
>
> *Seasons: Summer,* l. 916.

There are two species of Hyæna, the *spotted* and the *striped;* and that neither of these is untameable, may be proved from facts stated by writers of undoubted veracity. An individual of the *spotted* species, described by M. F. Cuvier, showed the utmost confidence in all its keepers; and for one in particular evinced an affection very unusual in wild animals, and parallel to nothing but what we witness daily in the com-

mon domestic dog. He was taken, very young, at the Cape of Good Hope, and had been tamed without difficulty. This docility is not peculiar to some individuals of this species, but common to all. Barrow informs us, in his journey to the Cape, that the spotted Hyæna has been tamed in the district of Schneuburg, where it is considered more serviceable for the chase than the dog, and fully equal to that animal in intelligence and fidelity.

The voracity of the striped Hyæna, its preference of the flesh of carcasses to living prey, and its consequent propensity to disinter the dead, have bestowed upon it a character for ferocity not founded in truth. Ill treatment will render it extremely furious; but under opposite circumstances it will exhibit the most remarkable degree of mildness and docility. Its cage may be entered with impunity; it will approach to fawn on those it knows: and were it not for the prejudices of the public on this subject, a Hyæna thus tamed might be entrusted with as much liberty as a common dog. There is in these respects a remarkable coincidence of character between the two Hyænas, and both

in a domestic state would doubtless render to man services of the same kind and degree as the canine species.*

It was formerly believed that the Hyæna imitated the human voice, and by that means attracted unwary travellers, and destroyed them.† Otway has alluded to this: —

'Tis thus *the false hyæna makes her moan,*
To draw the pitying traveller to her den:
Your sex are so, such false dissemblers all.
Orphan, act ii.

Milton, probably, has the same allusion, when he makes Samson thus address Dalilah ‡: —

Out, out, *hyæna!* these are thy wonted arts,
And arts of every woman false like thee.
Samson Agonistes, l. 748.

The voice of the Hyæna is very peculiar; its beginning seems somewhat like the moaning of a human voice, and the ending like one making a violent effort to vomit.§ Hence, perhaps, may have arisen the fable.

* Cuvier, vol. ii. p. 406.

† Solinus, ch. xxvii. Bewick, Hist. Quadr. p. 272.

‡ In Gesner's work there is a plate of an Hyæna represented with a female head and face.

§ Bewick, Hist. Quadr., p. 272.

LION.

(Leo Afer.)

The disposition attributed to this animal of making nothing its prey which appears dead is entirely imaginary, or arises from accidental circumstances.

And I no less her anger dread,
Than the poor wretch *that feigns him dead,*
While *some fierce lion doth embrace*
His breathless corpse, and licks his face;
Wrapt up in silent fear he lies,
Torn all in pieces, if he cries.

Waller. *Song.*

Under which bush's shade,
A lioness, with udders all drawn dry,
Lay couching, head on ground, with cat-like watch,
When that the sleeping man should stir; for 'tis
The royal disposition of that beast
To prey on nothing that doth seem as dead.*

Shakspeare, *As you like it,* act iv. sc. 3.

* Shakspeare has boldly availed himself of poetical licence, by transporting the Lion from his native Africa to the Forest of Arden.

So when the generous lion has in sight
His equal match, he rouses for the fight;
But *when his foe lies prostrate on the plain*,
He sheaths his paws, uncurls his angry mane;
Pleas'd with the bloodless honour of the day,
Walks over, and disdains the inglorious prey.
DRYDEN. *Hind and Panther*, pt. 3.

Unlike some carnivorous animals, which appear to derive a gratification from the destruction of animal life, beyond the mere administering to the cravings of appetite, the Lion, when once satiated, ceases to be an enemy. Hence, very different accounts are given by travellers of the generosity or cruelty of its nature, which result, in all probability, from the difference in time and circumstances, or degree of hunger, which the individual experienced, when the observations were made upon it. There are, certainly, many instances of a traveller having met with a Lion in the forest during the day, —

Who glar'd upon him, and went surly by,
Without annoying him.

But when urged by want, this tremendous animal is as fearless as he is powerful; though

in a state of confinement, or when not exposed to the extremity of hunger, he generally exhibits tokens of a more tender feeling than is usually to be met with in the Tiger, and most of the Felinæ.*

The supposed generosity of the Lion has been sometimes explained as resulting from its treachery and indolence. It seldom makes an open attack, but, like the rest of the feline genus, lies in ambush till it can conveniently spring upon its prey. Happy for those animals which are objects of its destruction, were its noble and generous nature, that has so often fired the imagination of poets, realized; and that its royal paw disdained to stain itself in the blood of any sleeping creature. The Lion is, in fact, one of the most indolent of all beasts of prey, and never gives himself the trouble of pursuit, unless hard pressed with hunger.†

* Cuvier, vol. ii. p. 432.
† Wood, Zoography, p. 203.

MOLE.

(Talpa caudata.)

It appears that this animal was not known to the ancients, who have been wrongfully accused of supposing that it was blind. The animal, respecting which Aristotle has twice made this assertion, was the Mole of his native country, the σπάλαξ, or ἀσπάλαξ of ancient Greece — a little subterraneous animal, totally deprived of sight, and which naturalists have become acquainted with but comparatively lately, and have designated it under the appellation of the *Rat-Mole.** Hence has probably arisen the error of early naturalists, and of the poets, who derived their knowledge from them, that the European Mole has no eyes.

> Like a *mole*, busy and *blind*,
> Works all his folly up and casts it outward
> To the world's open air.
>
> Dryden. *All for Love*, act iv. sc. 1.

* Cuvier, vol. ii. p. 197.

Tread softly, that *the blind mole* may not
Hear a foot fall; we now are near his cell.
SHAKSPEARE, *Tempest*, act iv. sc. 1.

The eyes, though very small, and a little concealed, are yet sufficiently apparent. The skin which surrounds them, as well as the hairs by which they are partly concealed, may be removed at the will of the animal, to permit it to perceive objects when it is above ground; while, at the same time, they preserve it from being dazzled by any glaring light. This skin and these hairs, on the other hand, form a complete covering for the eyes, and prevent them from receiving any injury, when the Mole is at work in its subterraneous galleries. The eyes, which are not imbedded in their orbits, like those of the majority of quadrupeds, are somewhat of the shape and bigness of a grain of mustard-seed, and appear like two black glittering points.* The different parts of them, and the several humours also, are perfect, as has been proved by repeated dissections †, so that the Mole is not even *dim-*

* Cuvier, vol. ii. p. 198.
† Shaw, Gen. Zool. vol. i. part 2. p. 517.

sighted, nor its vision imperfect, as Pope represents it: —

What modes of sight betwixt the wide extreme!
The mole's dim curtain, and the lynx's beam.
Essay on Man, Pt. I. l. 211.

The Mole's sense of hearing is remarkably fine, and justifies Shakspeare's allusion. Its touch also is delicate, and sense of smelling most exquisite. Its nutriment consists of tender succulent roots, the bulbs of the *colchicum*, also worms and insects.*

The labours of the Mole, at the commencement of a thaw, are thus described by Hurdis: —

Scarce disappears the deluge, when the mole,
Close prisoner long in subterraneous cell
Frost-bound, again the miner plays, and heaves,
With treble industry, the mellow mound
Along the swarded vale. The shepherd's eye
With unforgiving enmity surveys
The long concatenated sweep of hills,
Whose soft and crumbling soil abridges more
The scanty pittance of his hungry fold.
Favourite Village, Bk. 3.

* Cuvier, vol. ii. pp. 202—204.

Cowper has made them the subject of an ingenious comparison: —

> We mount again, and feel at every step
> Our foot half sunk in hillocks green and soft,
> Rais'd by the mole, the miner of the soil.
> He, not unlike the great ones of mankind,
> Disfigures earth, and plotting in the dark,
> Toils much to earn a monumental pile,
> That may record the mischiefs he has done.
>
> *Task*, Bk. 1.

PORCUPINE.

(Hystrix cristatus.)

Cowley, like other poets, adopted the popular notions of his day. The long-received opinion, that the Porcupine can discharge his quills at an enemy, afforded him an ingenious simile:—

> They are all weapons, and *they dart,*
> *Like porcupines, from every part.*
> Cowley, *Anac. on Beauty*, p. 74.*

It would be waste of time to particularize the long-continued error, (for such it in great degree is,) of the Porcupine possessing the power of darting its quills at pleasure, to a considerable distance, at its enemies. This notion seems now pretty generally exploded, and perhaps may have originated from some accidental circumstances; for the Porcupine, like most other quadrupeds, having the power

* Edit. Aikin.

of contracting, and shaking the general skin of the body, may sometimes, by this motion, cast off a few of its looser quills, to some distance, and thus even slightly wound any animal that may happen to stand in its way; and this may have given rise to the popular idea of its darting them, at pleasure, against its enemy.*

* Shaw, Zoolog. Lectures.

RIVER-HORSE.

(Hippopotamus.)

Thomson has represented the Hippopotamus as the Behemoth of Sacred Writ; but he has confounded it with the description there given of the Leviathan, by clothing it with "*plaited mail**:" for the Hippopotamus is not covered with scales, or a case of bone, or any thing analogous to them.

> The flood disparts; behold! *in plaited mail*
> *Behemoth rears his head;* glanc'd from his side
> The darted steel in idle shivers flies:
> He fearless walks the plain, or seeks the hills;
> There, as he crops his varied fare, the herds,
> In widening circles round, forget their food,
> And on the harmless stranger fearless gaze.
> *Seasons, Summer*, l. 709.

So far back as Gesner's time, the Hippopo-

* "His scales are his pride, shut up together as with a close seal. Darts are counted as stubble: he laugheth at the shaking of a spear." Job, xli. 15. 29.

Hippopotamus Crocodilum devorans. From Gesner.

tamus was not thus figured; and even Milton's line—

> The river-horse *and scaly crocodile.*
> *Par. Lost*, Bk. 7. l. 474.

(a very *copy* of Gesner's figure) might have led Thomson to a less incorrect representation.

The whole body of this animal is, in fact, nearly denuded, except at the end of the tail and the ears, and there are some rough hairs on the lips. The hide, above an inch thick, is hardly flexible. It is very seldom that the Hippopotamus is wounded in any other part than the head; but this does not happen from the impenetrable nature of the rest of the hide — a reason which has often been assigned, like many other such tales, for the purpose of exciting wonder. The truth is, that, as the Hippopotamus hardly ever quits the river but by night, and by day seldom ventures more than its head above the surface of the water, there is no other place left for the marksman: they live in rivers on roots and other vegetable substances. Only one species is known, found only in the rivers of the south of Africa. It came formerly by the Nile to the south of

Egypt, but it has long disappeared from that country. When no more than the upper part of the head is seen above the water, it appears very much like the head of a horse, and sufficiently justifies (says Mr. Burchell) the name given to it by the ancients, who, as this circumstance seems to prove, could rarely have had a sight of the entire animal, otherwise they would have discovered, that of all quadrupeds, this bears, in form and general appearance, the least resemblance to a horse.*

* Cuvier, vol. iii. p. 330. and 397.

WHALE.

(Balæna Mysticetus.)

For want of due knowledge of the subject, Milton has injured his august description of a sleeping whale, by an epithet, of all others, least according with the nature of the animal; none of the cetaceous tribe being furnished with *scales*, or any thing analogous to them.*

> That sea-beast
> Leviathan, which God, of all his works,
> Created hugest, that swim the ocean stream:
> Him, haply slumbering on the Norway foam,
> The pilot of some small night-founder'd skiff
> Deeming some island, oft, as seamen tell,
> With fixed anchor *in his scaly rind*
> Moors by his side, under the lea, while night
> Invests the sea, and wished morn delays.
> *Par. Lost*, Bk. 1. l. 201.

Waller also, in his "Battle of the Summer Islands," has ignorantly fallen into the same mistake:—

* Shaw, Gen. Zool. vol. ii. part ii. p. 487.

Nautæ in dorsa Cetorum, quæ insulas putant, anchoras figentes sæpe periclitantur. Hos Cetos Trolval *suâ linguâ appellant, Germanice* Teuffelwal. From Gesner.

Standing aloof with lead they *bruise the scales*,
And tear the flesh of the incensed *whales*.
Canto ii.

It must be acknowledged that this observation may appear, in no small degree, hypercritical (with respect to Milton), who, by the expression "*scaly rind*," might only mean, rough or scaly, in the same sense that those epithets are applied to the bark of a tree, or any irregular surface. There can be little doubt, however, but real and proper scales were intended by the poet; nor is it difficult to discover the particular circumstance which impressed Milton with the erroneous idea, viz. a figure in the works of Gesner, so injudiciously expressed, as to appear, upon a cursory view, as if coated with large scales, with a vessel near it, with harpooners, &c., over which is the observation of sailors often mistaking a Whale for an island, thus endangering themselves by attempting to anchor upon it. As the general learning and extensive reading of our great poet are so well known, it can hardly be doubted, that he was conversant with the writings of Gesner, whose work was then the great de-

pository of natural knowledge, and that the figure and description there given left a lasting impression on his mind.*

In the seventh book of Paradise Lost the same animal is again decribed, and with the same reference, but without this inaccuracy:—

> There leviathan,
> Hugest of living creatures, on the deep
> Stretch'd like a promontory, *sleeps or swims,*
> *And seems a moving land,* and at his gills
> Draws in, and at his trunk spouts out, a sea.
> L. 412.

* Shaw, Gen. Zool. vol. ii. part ii. p. 487.

THE END.

LONDON:
Printed by A. SPOTTISWOODE,
New-Street-Square.

UC SOUTHERN REGIONAL LIBRARY FACILITY
A 000 047 858 6